UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

☑ Quarterly report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the quarterly period ended July 1, 2017

or

☐ Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Commission file number: 001-34006

CARTESIAN, INC.
(Exact name of registrant as specified in its charter)

DELAWARE	48-1129619
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
7300 COLLEGE BLVD., SUITE 302, OVERLAND PARK, KS	66210
(Address of principal executive offices)	(Zip Code)

913-345-9315
Registrant’s telephone number, including area code

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer” “smaller reporting company,” and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐	Accelerated filer ☐
Non-accelerated filer ☐ (Do not check if a smaller reporting company)	
	Smaller reporting company ☑
	Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☑

As of July 29, 2017, Cartesian had outstanding 8,986,014 shares of common stock.

CARTESIAN, INC. INDEX

PART I. FINANCIAL INFORMATION

ITEM 1. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

CARTESIAN, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands)
(unaudited)

	July 1, 2017	December 31, 2016
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 3,020	$ 4,131
Accounts receivable (net of allowance for doubtful accounts of $281 and $398, respectively)	12,820	13,680
Inventory, net	271	362
Prepaid and other current assets	1,520	1,591
Total current assets	17,631	19,764
NONCURRENT ASSETS:		
Property and equipment, net	2,099	2,056
Intangible assets, net	448	557
Deferred income tax assets	—	—
Other noncurrent assets	616	324
Total Assets	$ 20,794	$ 22,701
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Trade accounts payable	$ 2,450	$ 1,704
Current borrowings	3,269	3,269
Liability for derivatives	828	970
Accrued payroll, bonuses and related expenses	2,455	3,752
Contingent consideration liability	2,268	1,903
Deferred revenue	889	1,327
Secured borrowing	2,790	768
Other accrued liabilities	1,208	2,117
Total current liabilities	16,157	15,810
NONCURRENT LIABILITIES:		
Deferred income tax liabilities	—	—
Deferred revenue	920	471
Other noncurrent liabilities	627	588
Total noncurrent liabilities	1,547	1,059
COMMITMENTS AND CONTINGENCIES (Note 10)		
Retained earnings	(170,695)	(167,781)
Other stockholders' equity	173,785	173,613
Total Stockholders' Equity	3,090	5,832
Total Liabilities and Stockholders' Equity	$ 20,794	$ 22,701

See notes to unaudited condensed consolidated financial statements.

CARTESIAN, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS)
(In thousands, except per share data)
(unaudited)

	Thirteen Weeks Ended		Twenty-six Weeks Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Revenues	$ 12,998	$ 18,899	$ 27,264	$ 39,216
Cost of services	9,045	12,609	18,846	25,904
Gross Profit	3,953	6,290	8,418	13,312
			—	—
Selling, general and administrative expenses (includes non-cash share-based compensation (benefit) expense of $(128) and $56 for the thirteen weeks ended July 1, 2017 and July 2, 2016, respectively, and $(9) and $189 for the twenty-six weeks ended July 1, 2017 and July 2, 2016, respectively)	5,372	8,235	11,363	16,001
Goodwill impairment	—	10,830	—	10,830
Loss from operations	(1,419)	(12,775)	(2,945)	(13,519)
Other income (expense):				
Interest expense, net	(73)	(62)	(142)	(122)
Change in fair value of warrants and derivative liabilities	69	(122)	142	(49)
Incentive warrants expense	(35)	(27)	(41)	(34)
Other income (expense)	(9)	68	—	68
Total other income (expense)	(48)	(143)	(41)	(137)
Loss before income taxes	(1,467)	(12,918)	(2,986)	(13,656)
Income tax (provision) benefit	43	10	72	(132)
Net Loss	(1,424)	(12,908)	(2,914)	(13,788)
Other comprehensive income (loss):				
Foreign currency translation adjustment	98	(736)	141	(1,233)
Comprehensive loss	$ (1,326)	$ (13,644)	$ (2,773)	$ (15,021)
Net loss per common share:				
Basic and diluted	$ (0.16)	$ (1.49)	$ (0.33)	$ (1.60)
Weighted average shares used in calculation of net loss per common share:				
Basic and diluted	8,774	8,636	8,708	8,640

See notes to unaudited condensed consolidated financial statements.

CARTESIAN, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)(unaudited)

	For the Twenty-six Weeks Ended	
	July 1, 2017	**July 2, 2016**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (2,914)	$ (13,788)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	596	508
Amortization of intangible assets	134	165
Share-based compensation	(9)	189
Deferred tax benefit	—	58
Goodwill impairment	—	10,830
Inventory adjustment	91	104
Bad debt expense	(27)	—
Change in fair value of warrants and derivative liabilities	(142)	49
Fair value adjustment to contingent consideration	365	(301)
Incentive warrants expense	41	34
Other changes in operating assets and liabilities:		
Accounts receivable, net	1,394	(36)
Prepaid and other assets	(192)	215
Trade accounts payable	664	(505)
Deferred revenue	(15)	(16)
Accrued severance liability and related costs	(108)	589
Accrued liabilities	(2,044)	476
Net cash used in operating activities	(2,166)	(1,429)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Business acquisition, net of cash acquired	—	(270)
Acquisition of property and equipment	(815)	(580)
Net cash used in investing activities	(815)	(850)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Secured borrowing	2,022	525
Repurchase of common stock	—	(85)
Issuance of common stock	1	19
Net cash provided by financing activities	2,023	459
Effect of exchange rate on cash and cash equivalents	(153)	(552)
Net decrease in cash and cash equivalents	(1,111)	(2,372)
Cash and cash equivalents, beginning of period	4,131	6,879
Cash and cash equivalents, end of period	$ 3,020	$ 4,507
Supplemental disclosure of cash flow information:		
Cash paid during period for interest	$ 140	$ 129
Cash paid during period for taxes	$ 131	$ —
Non-cash investing and financing transactions:		
Accrued property and equipment additions	$ 184	$ 143
Change in fair value of warrants and derivative liabilities	$ (142)	$ 49

See notes to unaudited condensed consolidated financial statements.

CARTESIAN, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(UNAUDITED)

1. Basis of Reporting

The condensed consolidated financial statements and accompanying notes of Cartesian, Inc. and its subsidiaries ("Cartesian," "we," "us," "our" or the "Company") as of July 1, 2017, and for the thirteen weeks and twenty-six weeks ended July 1, 2017 and July 2, 2016, are unaudited and reflect all normal recurring adjustments which are, in the opinion of management, necessary for the fair presentation of the Company's condensed consolidated financial position, results of operations, and cash flows as of these dates and for the periods presented. The unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") and pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC") for interim financial information. Consequently, these statements do not include all the disclosures normally required by U.S. GAAP for annual financial statements nor those normally made in the Company's Annual Report on Form 10-K. Accordingly, reference should be made to the Company's annual consolidated financial statements and notes thereto for the fiscal year ended December 31, 2016, included in the 2016 Annual Report on Form 10-K ("2016 Form 10-K") for additional disclosures, including a summary of the Company's accounting policies. The Condensed Consolidated Balance Sheet as of December 31, 2016 included in this report has been derived from the audited Consolidated Balance Sheet at that date but does not include all of the information and footnotes required by U.S. GAAP for complete financial statements. The Company has evaluated subsequent events for recognition or disclosure through the date these unaudited condensed consolidated financial statements were issued.

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the unaudited condensed consolidated financial statements and accompanying notes. Actual results could differ from those estimates. The results of operations for the thirteen weeks and twenty-six weeks ended July 1, 2017 are not necessarily indicative of the results to be expected for the full year ending December 30, 2017.

Going Concern - The accompanying consolidated financial statements have been prepared assuming that the
Company will continue as a going concern, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business for the twelve-month period following the date of issuance of these consolidated financial statements.

The Company's cash resources and cash flows from operations have been sufficient to pay its obligations and debts as they become due. However, the Company's current capital resources may not be sufficient to repay a promissory note payable to Elutions Capital Ventures S.à r.l, a subsidiary of Elutions, in an aggregate original principal amount of $3.3 million ("Elutions Note"), if it were to be called for redemption, and to fund the Company's operations going forward. The Elutions Note matures on March 18, 2019, but may be called for redemption by the holder at any time and is payable 30 days after it is called for redemption. In addition, Cartesian was obligated to pay the full amount of the earn-out consideration that was payable in connection with the acquisition of the Farncombe Entities in 2015 which equaled £719,483 pounds sterling (approximately US$1.0 million based on an exchange rate of £1.000 = US$1.300 as of July 1, 2017) and 461,055 shares of Company common stock (approximately £1,024,765 pounds sterling or US$1.3 million based on an exchange rate of £1.000= US$1.300 as of July 1, 2017). The earn-out consideration was paid in full after the end of the second quarter of fiscal 2017. The Company is not in default under the Elutions Note and does not have any reason to currently expect that the Elutions Note will be called for redemption, given that the Company is paying its debts as they become due (including making timely payments of interest on the Elutions Note), and a call by the holder of the Elutions Note would cause Elutions to no longer have the right to purchase shares of stock pursuant to the Tracking Warrant if the Elutions Note is called for redemption. Under the Tracking Warrant, Elutions has the right to purchase up to 996,544 shares of common stock of the Company for $3.28 per share. The Tracking Warrant expires March 18, 2020. See Note 2, Acquisition and Note 3, Strategic Alliance and Investment by Elutions, Inc., for additional discussion related to the earn-out and the Elutions Note, respectively.

The Company has entered into receivable financing and factoring arrangements with respect to certain accounts receivable, provided that the ability to finance receivables is subject to limitations, including in certain arrangements the willingness of the purchaser to purchase individual accounts receivable that are offered by the Company. If the Elutions Note is called for redemption by the holder or if the Company realizes significant negative cash flows from operations, it will be required to seek additional debt or equity financing. Elutions has certain rights of first offer in connection with debt financings by us, subject to certain exceptions. In addition, if we obtain debt financing from other lenders, subject to certain exceptions, Elutions may require us to redeem the Elutions Note and to repurchase the shares of our common stock originally acquired by Elutions at a price based upon market prices over 15 trading days prior to the repurchase. In addition, Elutions has certain preemptive rights in connection with equity issuances by the Company, subject to certain exceptions, and Cartesian and its subsidiaries may not, without the prior written consent of Elutions, issue options, warrants or similar rights or convertible securities, other than with respect to certain excluded issuances.

The Company is exploring alternatives to address its liquidity needs in the event the Elutions Note is called for redemption. However, there can be no assurance that financing will be available in amounts or on terms acceptable to the Company, if at all. The Company's ability to secure new financing may be impacted by economic and financial market conditions. If financing is obtained through the sale of additional equity securities or debt securities with equity features, it could result in dilution to the Company's stockholders. If adequate funds were not available on acceptable terms, our business, results of operations, cash flows, and financial condition could be materially adversely affected.

In the fourth quarter of 2016, the Company adopted Accounting Standards Update 2014-15, Presentation of Financial Statements - Going Concern that requires management to assess conditions or events that raise substantial doubt about an entity's ability to continue as a going concern within one year after the financial statements are issued. Management has concluded under ASU 2014-15 that there is substantial doubt about the Company's ability to continue as a going concern if the Company is unable to arrange financing sufficient to pay off the Elutions Note upon a call for redemption. However, the Company currently expects that such financing can be obtained if necessary, subject to market conditions and the Company's financial condition at the time the Company seeks such financing.

If the Company becomes unable to continue as a going concern, it may have to (i) initiate litigation or seek protection under bankruptcy reorganization laws, or (ii) liquidate its assets and the values it receives for its assets in liquidation or dissolution could be significantly lower than the values reflected in the consolidated financial statements. The accompanying consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty, including any adjustments to reflect the possible future effects of the recoverability and classification of recorded asset amounts or amounts and classification of liabilities that might be necessary should the Company be unable to continue as a going concern.

Revenue Recognition - The Company recognizes revenue from time and materials consulting contracts in the period in which its services are performed. In addition to time and materials contracts, the Company also has fixed fee contracts. The Company recognizes revenues on milestone or deliverables-based fixed fee contracts and time and materials contracts not to exceed contract price using the percentage of completion-like method described by Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 605-35, "*Revenue Recognition - Construction-Type and Production-Type Contracts*". For fixed fee contracts where services are not based on providing deliverables or achieving milestones, the Company recognizes revenue on a straight-line basis over the period during which such services are expected to be performed. In connection with some fixed fee contracts, the Company may receive payments from customers that exceed revenues up to that point in time. The Company records the excess of receipts from customers over recognized revenue as deferred revenue. Deferred revenue is classified as a current liability to the extent it is expected to be earned within twelve months from the date of the balance sheet.

The FASB ASC 605-35 percentage-of-completion methodology involves recognizing revenue using the percentage of services completed, on a current cumulative cost to total cost basis, using a reasonably consistent profit margin over the period. Due to the longer term nature of these projects, developing the estimates of costs often requires significant judgment. Factors that must be considered in estimating the progress of work completed and ultimate cost of the projects include, but are not limited to, the availability of labor and labor productivity, the nature and complexity of the work to be performed, and the impact of delayed performance. If changes occur in delivery, productivity or other factors used in developing the estimates of costs or revenues, the Company revises its cost and revenue estimates, which may result in increases or decreases in revenues and costs, and such revisions are reflected in income in the period in which the facts that give rise to that revision become known.

Managed Services Implementation Revenues and Costs - Managed service arrangements provide for the delivery of a software or technology based solution to clients over a period of time without the transfer of a license or a software sale to the customer. For long-term managed service agreements, implementation efforts are often necessary to develop the software utilized to deliver the managed service. Costs of such implementation efforts may include internal and external costs for coding or customizing systems and costs for conversion of client data. The Company may invoice its clients for implementation fees at the go-live date of the underlying software. Lump sum implementation fees received from clients are initially deferred and recognized on a pro-rata basis as services are provided. Specific, incremental and direct costs of implementation incurred prior to the services going live are deferred pursuant to FASB ASC 605-35-25 and amortized over the period that the related ongoing services revenue is recognized to the extent that the Company believes the recoverability of the costs from the contract is probable. If a client terminates a managed services arrangement prior to the end of the contract, a loss on the contract may be recorded, if applicable, and any remaining deferred implementation revenues and costs would then be recognized into earnings generally over the remaining service period through the termination date. During the thirteen weeks and twenty-six weeks ended July 1, 2017, $403,000 and $536,000 of implementation costs related to managed service contracts were deferred, respectively. During the thirteen weeks and twenty-six weeks ended July 2, 2016, no implementation costs related to managed service contracts were deferred. Unamortized deferred implementation costs were $755,000 and $318,000 as of July 1, 2017 and December 31, 2016, respectively.

Research and Development and Software Development Costs - During the thirteen weeks ended July 1, 2017 and July 2, 2016, internal use software development costs of $75,000 and $153,000, respectively, were expensed as incurred. During the twenty-six weeks ended July 1, 2017 and July 2, 2016, internal use software development costs of $177,000 and $275,000, respectively, were expensed as incurred. During the thirteen weeks ended July 1, 2017 and July 2, 2016, $83,000 and $210,000, respectively, of internal use software development costs were capitalized. During the twenty-six weeks ended July 1, 2017 and July 2, 2016, $183,000 and $357,000, respectively, of internal use software development costs were capitalized.

Foreign Currency Transactions and Translation - Cartesian Limited, the international operations of Cambridge Strategic Management Group, Inc., Farncombe France SARL, Farncombe Technology Limited, and Farncombe Engineering Services Limited conduct business primarily denominated in their respective local currency, which is their functional currency. Assets and liabilities have been translated to U.S. dollars at the period-end exchange rates. Revenues and expenses have been translated at exchange rates which approximate the average of the rates prevailing during each period. Translation adjustments are reported as a separate component of other comprehensive loss in the Condensed Consolidated Statements of Operations and Comprehensive Loss. Accumulated other comprehensive loss resulting from foreign currency translation adjustments totaled $6.6 million and $6.8 million as of July 1, 2017 and December 31, 2016, respectively, and is included in Total Stockholders' Equity in the Condensed Consolidated Balance Sheets. Assets and liabilities denominated in other than the functional currency of a subsidiary are re-measured at rates of exchange on the balance sheet date. Resulting gains and losses on foreign currency transactions are included in the Company's results of operations. During the thirteen weeks ended July 1, 2017, realized and unrealized exchange gains of $134,000 were included in our results of operations and for the thirteen weeks ended July 2, 2016, realized and unrealized exchange losses of $248,000 were included in our results of operations. During the twenty-six weeks ended July 1, 2017, realized and unrealized exchange gains of $192,000 were included in our results of operations and for the twenty-six weeks ended July 2, 2016, realized and unrealized exchange losses of $322,000 were included in our results of operations.

Loss Per Share - The Company calculates and presents earnings (loss) per share using a dual presentation of basic and diluted earnings (loss) per share. Basic earnings (loss) per share is computed by dividing net income (loss) by the weighted average number of common shares outstanding for the period. The weighted average number of common shares outstanding excludes treasury shares held by the Company. Diluted earnings (loss) per share is computed in the same manner except that the weighted average number of shares is increased for dilutive securities.

In accordance with the provisions of FASB ASC 260, "*Earnings per Share*", the Company uses the treasury stock method for calculating the dilutive effect of employee stock options, non-vested shares and warrants. The employee stock options, non-vested shares and warrants will have a dilutive effect under the treasury stock method only when average market value of the underlying Company common stock during the respective period exceeds the assumed proceeds. For share-based payment awards with a performance condition, the Company must first use the guidance on contingently issuable shares in FASB ASC 260-10 to determine whether the awards should be included in the computation of diluted earnings per share for the reporting period. For all non-vested performance-based awards, the Company determines the number of shares, if any, that would be issuable at the end of the reporting period if the end of the reporting period were the end of the contingency period. In applying the treasury stock method, assumed proceeds include the amount, if any, the employee must pay upon exercise, the amount of compensation cost for future services that the Company has not yet recognized, and the amount of tax benefits, if any, that would be credited to additional paid-in capital assuming exercise of the options and the vesting of non-vested shares. For the thirteen weeks ended July 1, 2017, approximately 32,000 shares related to outstanding stock options, non-vested shares and warrants that otherwise would have been included in the diluted earnings per share calculation were not included because they would have been anti-dilutive due to our net loss for those periods. For the thirteen weeks ended July 2, 2016 there were no shares related to outstanding stock options, non-vested shares and warrants that otherwise would have been included in the diluted earnings per share calculation that would have been anti-dilutive. During the twenty-six weeks ended July 1, 2017 and July 2, 2016, approximately 37,000 shares and 8,000 shares related to outstanding stock options, non-vested shares and warrants that otherwise would have been included in the diluted earnings per share calculation were not included because they would have been anti-dilutive due to our net loss for those periods.

Accounts Receivable - The Company has entered into agreements with third-party financial institutions under which it can selectively elect to transfer to the financial institutions accounts receivable with certain of the Company's largest, international customers on a non-recourse basis. These agreements give the Company optionality to convert outstanding accounts receivable to cash. For any transfer of accounts receivable under these agreements that qualifies as a sale, the Company applies the guidance in FASB ASC 860, *"Transfers and Servicing – Sales of Financial Assets",* which requires the derecognition of the carrying value of those accounts receivable on the Condensed Consolidated Balance Sheets and recognition of a loss on the sale of an asset in operating expenses in the Condensed Consolidated Statements of Operations and Comprehensive Loss. The loss is determined at the date of transfer based upon the amount at which the accounts receivable are transferred less any fees, discounts and other charges provided under the agreements. During the thirteen weeks ended July 1, 2017 and July 2, 2016, $2.4 million and $6.3 million, respectively, in accounts receivable were transferred pursuant to these agreements which qualified as sales of receivables and the related carrying amounts were derecognized. During the twenty-six weeks ended July 1, 2017 and July 2, 2016, $5.9 million and $10.7 million, respectively, in accounts receivable were transferred pursuant to these agreements which qualified as sales of receivables and the related carrying amounts were derecognized. The loss on the sale of these accounts receivable recorded in the Condensed Consolidated Statements of Operations and Comprehensive Loss was immaterial for each of the thirteen weeks ended July 1, 2017 and July 2, 2016 and was $30,000 and $45,000 for the twenty-six weeks ended July 1, 2017 and July 2, 2016, respectively.

In 2016 the Company entered into a Factoring Agreement ("Factoring Agreement") with RTS Financial Service, Inc. ("RTS"). Pursuant to the terms of the Factoring Agreement, the Company may offer for sale, and RTS may purchase, certain accounts receivable of the Company on an account by account basis (such purchased accounts, the "Purchased Accounts"). Under the Factoring Agreement, upon purchase RTS becomes the absolute owner of the Purchased Accounts, which are payable directly to RTS, subject to certain repurchase obligations of the Company. Proceeds from transfers under the Factoring Agreement reflect the face value of the account receivable less a factor's fee. The factor's fee is computed on a daily basis until the amount of the Purchased Account is paid to RTS, and equals the amount of the Purchased Account multiplied by the sum of the prime rate then in effect plus 6.49% divided by 360. Upon purchase of a Purchased Account, RTS will pay to the Company the amount of the Purchased Account, less a reserve of 20% of that amount, which reserve (less the total fee calculated) is payable to the Company upon collection of the Purchased Account by RTS. The fee is recorded as interest expense within the Condensed Consolidated Statements of Operations and Comprehensive Loss in the period the fee becomes payable. During the thirteen weeks ended July 1, 2017 and July 2, 2016, the Company factored $1,435,000 and $647,000, respectively, of accounts receivable under the Factoring Agreement. During the twenty-six weeks ended July 1, 2017 and July 2, 2016, the Company factored $1,869,000 and $647,000, respectively, of accounts receivable under the Factoring Agreement. As of July 1, 2017 and December 31, 2016, the Company recognized a liability of $1,026,000 and $768,000, respectively, which is recorded as Secured borrowing on the Condensed Consolidated Balance Sheets. Until received, the reserve amount withheld at the time of transfer is recorded as a receivable and is included in Prepaid and other current assets on the Condensed Consolidated Balance Sheets. As of July 1, 2017 and December 31, 2016 the amount recorded as a receivable for the reserve withheld by RTS was $205,000 and $154,000, respectively. The amount of fees recorded as interest expense were immaterial for the thirteen weeks ended July 1, 2017 and July 2, 2016 and the twenty-six weeks ended July 1, 2017 and July 2, 2016.

Also in 2016, Cartesian Limited, a U.K. subsidiary of Cartesian, Inc., entered into an Invoice Discounting Agreement, a Debenture (security agreement) and certain related agreements (collectively, the "Agreement") with RBS Invoice Finance Limited ("RBS"). In April 2017, the Company entered into agreements with RBS to include Farncombe Engineering Services Ltd. and Farncombe Technology Limited as companies that could assign eligible accounts receivable to RBS. Pursuant to the terms of the Agreement, Cartesian Limited, Farncombe Engineering Services Ltd., and Farncombe Technology Limited may assign to RBS certain eligible accounts receivable (such purchased accounts, the "U.K. Purchased Accounts").

The Agreement has a maximum funding level of £3,000,000 with respect to Cartesian Limited, a combined £1,000,000 maximum funding level with respect to Farncombe Engineering Services Ltd. and Farncombe Technology Limited, and a combined £3,000,000 maximum funding level with respect to the three entities. At the time of the purchase of a U.K. Purchased Account, RBS will make an initial payment to the applicable entity of no more than 50% of the U.K. Purchased Account. Upon collection of a U.K. Purchased Account, RBS will pay to the applicable entity the amount of the U.K. Purchased Account, less the initial payment and a discounting charge. The discounting charge is computed on a daily basis until the amount of the U.K.

Purchased Account is paid to RBS, and equals the amount of the U.K. Purchased Account multiplied by the sum of the National Westminster Bank Plc base rate then in effect plus 1.75% divided by 365. The Agreement for Cartesian Limited includes a fixed fee service charge of £833 per month and the agreement for Farncombe Engineering Services Ltd. includes a fixed fee service charge of £250 per month. The agreements have loan concentration limits regarding the obligors on U.K. Purchased Accounts. The discounting charges are recorded as interest expense within the Condensed Consolidated Statements of Operations and Comprehensive Loss in the period the fee becomes payable.

The entities obligations under the agreements are secured by certain assets of the entities, including all equipment and intellectual property, all stock of subsidiaries held by them and certain accounts receivable. Each of the three entities guarantees the obligations of the other entities. Under the Agreement, Cartesian Limited's net worth, as measured by issued share capital and retained earnings, less all intangible assets, may not fall below £7,500,000 in any 12 month period.

RBS may require the applicable entity to repurchase U.K. Purchased Accounts upon a number of specified events, including if the entity breaches or defaults on any of its obligations under the Agreement or if in the case of Cartesian Limited it fails to meet the net worth requirement. The entities are in compliance with those obligations and Cartesian Limited meets the net worth requirement.

The agreements have an initial term of 12 months and continue after the initial term until terminated by either the applicable entity or RBS. Each entity may terminate its agreement at any time during the initial term upon approval of RBS or upon six months' notice of intent to terminate (three months' notice in the case of the Farncombe entities). RBS may terminate the agreements upon certain other events or conditions included in the agreements.

During the thirteen weeks and twenty-six weeks ended July 1, 2017, the entities factored $8.0 million and $11.9 million, respectively, under the agreements and as of July 1, 2017 recognized a liability of $1.8 million which is recorded as Secured borrowing on the Condensed Consolidated Balance Sheets. No amounts were factored under the Agreement during fiscal 2016.

Inventory – In accordance with the provisions of FASB ASC 330, "*Inventory*", the Company's inventory is stated at the lower of cost, using the first-in, first-out (FIFO) method, or fair value. As of July 1, 2017 and December 31, 2016, the Company had $0.3 million and $0.4 million in inventory, respectively, all of which was finished goods. All of the inventory was purchased in July 2014 from Elutions, Inc. ("Elutions"), which owns more than five percent of the outstanding shares of common stock of the Company. See Note 3, Strategic Alliance and Investment by Elutions, Inc.

Long-lived Assets - The Company reviews long-lived assets to be held and used for impairment whenever events or changes in circumstances indicate that the carrying amount of these assets might not be recoverable in accordance with the provisions of FASB ASC 360, "*Property, Plant and Equipment*". There was no impairment of long-lived assets during the thirteen weeks or twenty-six weeks ended July 1, 2017.

Recent Accounting Pronouncements – In May 2017, the FASB issued Accounting Standards Update ("ASU") 2017-09, "Scope of Modification Accounting", which amends the scope of modification accounting for share-based payment arrangements, provides guidance on the types of changes to the terms or conditions of share-based payment awards to which an entity would be required to apply modification accounting under ASC 718. For all entities, the ASU is effective for annual reporting periods, including interim periods within those annual reporting periods, beginning after December 15, 2017. Early adoption is permitted, including adoption in any interim period. The Company is currently evaluating the impact the application of ASU 2017-09 will have on the Company's condensed consolidated financial statements.

In August 2016, the FASB issued ASU 2016-15, "Classification of Certain Cash Receipts and Cash Payments", which will make eight targeted changes to how cash receipts and cash payments are presented and classified in the statement of cash flows. This ASU is effective for fiscal years beginning after December 15, 2017, including interim periods within those years, and the ASU requires adoption on a retrospective basis. Early adoption is permitted. The Company is currently evaluating the impact the application of ASU 2016-15 will have on the Company's condensed consolidated financial statements.

In March 2016, the FASB issued ASU 2016-9, "Improvements to Employee Share-Based Payment Accounting", which simplifies several aspects of the accounting for employee share-based payment transactions, including accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification in the statement of cash flows. The ASU is effective for public companies for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years. Early adoption is permitted. A modified retrospective approach is required on the balance sheet by means of a cumulative-effect adjustment to equity as of the beginning of the period in which the guidance is adopted. A retrospective or prospective approach can be used for the cash flow statement and a prospective approach is required for the statement of operations. The Company adopted this guidance beginning in fiscal year 2017 and its adoption did not have a material impact on the Company's consolidated financial statements.

In February 2016, the FASB issued ASU 2016-2, "Leases" which, for operating leases, requires a lessee to recognize a right-of-use asset and a lease liability, initially measured at the present value of the lease payments, in its balance sheet. The standard also requires a lessee to recognize a single lease cost, calculated so that the cost of the lease is allocated over the lease term, on a generally straight-line basis. The ASU is effective for public companies for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption is permitted. A modified retrospective approach is required for all leases existing or entered into after the beginning of the earliest comparative period in the consolidated financial statements. The Company is currently evaluating the effects that the adoption of ASU 2016-2 will have on the Company's consolidated financial statements.

In July 2015, the FASB issued ASU 2015-11 which requires entities to measure most inventory at the lower of cost and net realizable value thereby simplifying the existing guidance which required entities to measure inventory at the lower of cost or market. Under the current guidance, market is defined as replacement cost, net realizable value or net realizable value less a normal profit margin. The newly issued guidance eliminates the requirement to determine replacement cost and defines net realizable value as the estimated selling prices in the ordinary course of business less reasonably predictable costs of completion, disposal and transportation. This new guidance is effective for the Company beginning in fiscal 2017. The adoption of this standard did not have a material effect on the Company's consolidated financial statements.

In May 2014, the FASB issued ASU 2014-9, Revenue from Contracts with Customers. This standard update clarifies the principles for recognizing revenue and develops a common revenue standard for U.S. GAAP and International Financial Reporting Standards. The standard update intends to provide a more robust framework for addressing revenue issues; improve comparability of revenue recognition practices across entities, industries, jurisdictions, and capital markets; and provide more useful information to users of financial statements through improved disclosure requirements. Upon adoption of this standard update, we expect that the allocation and timing of revenue recognition will be impacted. In July 2015, the FASB voted to defer the effective date of this new standard by one year and to permit early adoption beginning as of the original effective date of the new standard. The provisions of FASB ASU 2014-9 will now be effective for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period, and are to be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of adoption. The Company expects to adopt the new revenue guidance under the modified retrospective approach. The Company is currently evaluating the impact that this standard update will have on its consolidated financial statements.

2. Acquisition

On July 22, 2015, the Company entered into a Share Purchase Agreement (the "Purchase Agreement") and completed the acquisition of all of the outstanding shares of capital stock of Farncombe France SARL, an entity formed under the laws of France, and Farncombe Technology Limited, a company incorporated and registered in England and Wales (collectively, the "Farncombe Entities"). The Farncombe Entities operate primarily in the U.K. and Europe and are in the business of providing strategic consultancy, content security, testing and implementation services for broadcast and broadband internet digital television. Farncombe's experience in these areas along with Cartesian's strategic, operational and technical capabilities in serving global service providers strengthens the Company's ability to support convergence and quad play offerings in this growing market.

The total purchase price, subject to adjustment in accordance with the terms of the Purchase Agreement, was £4,360,620 pounds sterling (approximately US$6.8 million based on an exchange rate of £1.000 = US$1.556 as of July 21, 2015) comprised of:

- Cash paid at the closing in the amount of £654,093 pounds sterling (approximately US$1.0 million based on an exchange rate of £1.000 = US$1.556 as of July 21, 2015) which was funded from our available cash on hand and represents 15% of the purchase price.

- £1,308,186 pounds sterling (approximately US$2.0 million based on an exchange rate of £1.000 = US$1.556 as of July 21, 2015) settled by the issuance of 588,567 shares of Company common stock at the closing which equals 30% of the purchase price. The number of shares issued at the closing was calculated using a volume-weighted average share price for Company common stock on the Nasdaq Stock Market for the 30 days ending on the day before the date of the signing of the Purchase Agreement and based upon the average pounds sterling to dollar exchange rate recorded by the Financial Times for the 30 days ending on the day before the date of signing of the

Purchase Agreement. The share price resulting from this calculation was £2.22 pounds sterling per share (US$3.46 per share).

- Additional consideration in the amount of £654,093 pounds sterling (approximately US$1.0 million based on an exchange rate of £1.000 = US$1.556 as of July 21, 2015) which represents 15% of the purchase price, payable after the closing in accordance with the Purchase Agreement upon determination of the net working capital of the Farncombe Entities as prescribed in the Purchase Agreement, and as adjusted based upon the relative amounts of the net working capital of the Farncombe Entities as of May 31, 2015 and the closing and as compared to the target amount of net working capital as provided in the Purchase Agreement.

- Earn-out consideration (the “Earn-Out”) which is potentially payable in cash and/or shares of Company common stock as elected by each Seller in the Purchase Agreement and represents 40% of the purchase price as described below.

On April 17, 2017, the Company entered into a letter agreement (the “Letter Agreement”) with the former shareholders of the Farncombe Entities (the “Sellers”). In the Letter Agreement, the parties agreed to a final determination of the Earn-Out and the consideration payable related to net working capital as adjusted, pursuant to which the Company agreed to pay to Sellers an additional amount equal to any amount received by the Company following the date of the Letter Agreement in respect of repayment of a loan of €50,000 (approximately US$57,000 based on an exchange rate of €1.000 = US$1.140 as of July 1, 2017) made to a third party by Farncombe Technology Limited prior to the closing under the Purchase Agreement. The parties also agreed that the Earn-Out target was expected to be achieved, and that the Company would pay 100% of the Earn-Out consideration described above to the Sellers. The Company also agreed in separate agreements that performance-based awards granted to two of the Sellers as employees of the Company based upon achievement of the Earn-Out would be paid in full.

The aggregate amount payable pursuant to the Earn-Out consists of cash in an amount up to £719,483 pounds sterling (approximately US$1.0 million based on an exchange rate of £1.000= US$1.300 as of July 1, 2017) and up to 461,055 shares of Company common stock (approximately £1,024,765 pounds sterling or US$1.3 million based on an exchange rate of £1.000= US$1.300 as of July 1, 2017) and based upon the value of the shares as described below. Amounts payable under the Earn-Out are based upon the amounts of specified revenues attributable to the Farncombe Entities after June 1, 2015 through July 22, 2017, as defined in the Purchase Agreement. Pursuant to the Purchase Agreement, the number of shares of Company common stock payable under the Purchase Agreement at the closing and pursuant to the Earn-Out was determined based on the volume weighted average share price for Company common stock on the Nasdaq Stock Market for the 30 days ending on the day before the date of signing of the Purchase Agreement and based upon the average pounds sterling to dollar exchange rate recorded by the Financial Times for the 30 days ending on the day before the date of signing of the Purchase Agreement. The earn-out consideration was paid in full after the end of the second quarter of fiscal 2017.

In fiscal 2015 the Company paid approximately $2.1 million to the former shareholders of the Farncombe Entities with respect to the consideration payable related to net working capital as adjusted pursuant to the Purchase Agreement. This represented payment of a portion of the purchase price in the amount of £654,093 pounds sterling (approximately US$1.0 million) payable in accordance with the Purchase Agreement along with an additional £743,753 pounds sterling (approximately US$1.1 million) related to the working capital adjustment for excess working capital under the Purchase Agreement. In March 2016, the Company paid additional amounts of approximately £184,000 and €12,000 (approximately US$0.3 million) to the former shareholders of the Farncombe Entities with respect to net working capital as adjusted. In the fourth quarter of fiscal 2016 and the first quarter of fiscal 2017, the Company made payments of £20,000 (approximately US$25,000) and £48,000 (approximately US$59,000), respectively, to the former shareholders of the Farncombe Entities with respect to net working capital as adjusted.

Up until the effective date of the Letter Agreement, the Company had classified the Earn-Out liability as a Level 3 liability and the fair value of the Earn-Out liability was evaluated each reporting period with changes in its fair value included in the Company’s results of operations. During the thirteen weeks and twenty-six weeks ended July 1, 2017, the change in the fair value of the Earn-Out liability were increases of $80,000 and $365,000, respectively, which are included in Selling, general and administrative expenses on the Condensed Consolidated Statements of Operations and Comprehensive Loss. During the thirteen weeks and twenty-six weeks ended July 2, 2016, the change in the fair value of the Earn-Out liability was a decrease of $53,000 and a decrease of $301,000, respectively, which is included in Selling, general and administrative expenses on the Condensed Consolidated Statements of Operations and Comprehensive Loss. The balance of the Earn-Out liability as of July 1, 2017 and December 31, 2016 was $2,268,000 and $1,903,000, respectively, which is recorded as "Contingent consideration liability", a current liability, in the Condensed Consolidated Balance Sheets. See Note 9, Fair Value Measurements, for discussion of the determination of fair value of the Earn-Out liability.

3. Strategic Alliance and Investment by Elutions, Inc.

Strategic Alliance and Investment by Elutions, Inc.

On February 25, 2014, the Company entered into an investment agreement (the "Investment Agreement") with Elutions, a provider of operational business intelligence solutions. Under the Investment Agreement, the Company agreed to issue and sell shares of common stock to Elutions and to issue stock purchase warrants to Elutions, and the parties agreed that a subsidiary of Elutions would loan funds to a subsidiary of the Company. On March 18, 2014, the Company and Elutions completed the closing (the "Closing") of the transactions contemplated under the Investment Agreement.

At the Closing, (a) the Company issued and sold 609,756 shares of common stock to Elutions at a price of $3.28 per share, for an aggregate purchase price of $2,000,000, (b) the Company's subsidiary, Cartesian Limited, issued a promissory note (the "Note") payable to Elutions Capital Ventures S.à r.l, a subsidiary of Elutions, in an aggregate original principal amount of $3,268,664, payable in equivalent Great Britain Pounds Sterling, and the Company issued to Elutions a Common Stock Purchase Warrant (Tracking) related to the Note to purchase 996,544 shares of common stock of the Company for $3.28 per share (the "Tracking Warrant"), and (c) the Company issued to Elutions a Common Stock Purchase Warrant (Commercial Incentive) pursuant to which Elutions can earn the right to purchase up to 3,400,000 shares of common stock of the Company at prices ranging from $3.85 per share to $4.85 per share based on the Company's financial results related to certain customer contracts obtained jointly by the Company and Elutions (the "Incentive Warrant"). The Incentive Warrant and the Tracking Warrant are referred to collectively below as the "Warrants".

The Investment Agreement contains a number of agreements and covenants, including (i) certain affirmative and negative covenants relating to the Note applicable to the Company and its subsidiaries, (ii) an agreement of the Company to assign to Elutions certain customer contracts obtained jointly with Elutions if a competitor acquires control of the Company, (iii) confidentiality restrictions applicable to both parties, (iv) a standstill agreement of Elutions, (v) an agreement of the parties to negotiate in good faith for the purchase by Elutions of additional shares of Common Stock equal to 6.5% of outstanding shares from the Company or in open market purchases if Elutions then owns or is vested with the right to acquire 38.5% of the shares of Common Stock then outstanding, subject to any applicable stockholder approval requirements, (vi) the grant of a right of first offer to Elutions to loan funds to the Company in the future if the Company intends to incur or assume indebtedness, subject to certain exceptions, (vii) a grant of pre-emptive rights to Elutions with respect to future issuances and sales of equity securities by the Company, subject to certain exceptions, (viii) the right of Elutions to designate one member of the Board of Directors of the Company if it meets certain ownership thresholds, and (ix) restrictions on the issuance by the Company of options, warrants or similar rights or convertible securities, other than with respect to certain excluded issuances.

Promissory Note

The Note issued at Closing by the Company's subsidiary, Cartesian Limited, in the aggregate original principal amount of $3,268,664, bears interest at the rate of 7.825% per year, payable monthly, and matures on March 18, 2019. The Note must be redeemed by Cartesian Limited within 30 days upon notification by the holder at any time (the "Holder Redemption Option") and may be prepaid by Cartesian Limited after 18 months if the trading price of the Company's common stock exceeds $5.50 per share for a specified period of time and may be prepaid by Cartesian Limited at any time after 30 months. The obligations of Cartesian Limited under the Note are guaranteed by the Company pursuant to a Guaranty entered into by the Company at Closing and are secured by certain assets relating to client contracts involving Elutions pursuant to a Security Agreement entered into by the Company and Elutions at Closing. Amounts outstanding under the Note may be applied to the exercise price of the Company's common stock under the Tracking Warrant. Upon occurrence of an event of default, the Note would bear interest at 9.825% per year and could be declared immediately due and payable. Interest expense was approximately $63,000 for each of the thirteen weeks ended July 1, 2017 and July 2, 2016, respectively, and was $126,000 for each of the twenty-six weeks ended July 1, 2017 and July 2, 2016, respectively.

Tracking Warrant

Under the Tracking Warrant, Elutions may acquire 996,544 shares of common stock of the Company for $3.28 per share at any time and from time to time through March 18, 2020. The Company may require Elutions to exercise or forfeit the Tracking Warrant at any time (i) after 18 months if the trading price of the Company's common stock exceeds $5.50 per share for a specified period of time and the Company meets certain cash and working capital thresholds and (ii) after 30 months if the Company meets certain cash and working capital thresholds. To the extent amounts are outstanding under the Note, Elutions and the Company (if the Company is requiring exercise of the Tracking Warrant by Elutions as described above) may offset such amounts against the exercise price for shares of common stock acquired under the Tracking Warrant. The Tracking Warrant expires if the Note is redeemed upon exercise of the Holder Redemption Option.

Incentive Warrant

Under the Incentive Warrant, Elutions can earn the right to purchase up to 3,400,000 shares of common stock of the Company at prices ranging from $3.85 per share to $4.85 per share based on the Company's financial results as described below. The Incentive Warrant expires on March 18, 2020. The right to exercise the Incentive Warrant to acquire shares is subject to satisfaction of certain performance conditions based on revenues or cash received by the Company under customer contracts acquired jointly with Elutions through a five-year period from March 18, 2014 until March 18, 2019. The Incentive Warrant may vest upon satisfaction of the performance conditions during the five-year period. The number of shares of common stock for which the Incentive Warrant may become exercisable during each year in the five-year period under the vesting provisions is determined by dividing four percent of such revenues and cash recognized or received by the Company in such year by the warrant exercise price per share for that year. In addition, the right to acquire shares may vest at the end of the five-year period for contracts that have been signed and with respect to which revenues are expected to be earned or cash is expected to be received after the end of the five-year period. The exercise price increases $0.25 per year for shares earned in each year of the five-year period and is payable in cash, provided that Elutions has the right to utilize a cashless exercise procedure to acquire shares of common stock under the Incentive Warrant for a limited period of time each year after the right to acquire such shares vests. Any shares utilized to exercise such cashless exercise right will not reduce the maximum number of shares that may be earned and acquired under the Incentive Warrant.

Additional Warrant Provisions

Each of the Warrants has economic anti-dilution protection provisions which provide for adjustments to the exercise price and the number of shares of common stock which may be acquired pursuant to the Warrants in the event of issuances of shares of common stock by the Company at a price less than the 30-day volume weighted average trading price at the time of issuance, subject to a number of exceptions. Each of the Warrants also permits Elutions (subject to certain exceptions) to purchase shares in future equity offerings made by the Company on a pro rata basis to all stockholders, with such participation right based upon the maximum number of shares that may be purchased under the Warrant.

Registration Rights

At Closing, the Company and Elutions entered into a Registration Rights Agreement (the "Registration Rights Agreement"), pursuant to which the Company has obligations to register for resale the shares of common stock issued under the Investment Agreement and the Warrants. Under the Registration Rights Agreement, the Company granted certain piggyback registration rights to Elutions and agreed to file and maintain a resale shelf registration statement for the benefit of Elutions. The resale shelf registration was filed with the SEC on August 12, 2014 and was declared effective on August 26, 2014.

Commercial Relationship

The Investment Agreement and the agreements and instruments described above are part of a strategic relationship between the Company and Elutions. As part of the strategic relationship, the parties entered into certain commercial framework documents, including a Market Development Agreement and related Inventory Agreement, on February 25, 2014, and enter into client agreements and bilateral agreements from time to time in the ordinary course of business outlining the terms of the parties' commercial relationship with respect to business development and providing products, solutions and services to clients. The parties have agreed to a term of five years, with automatic two-year renewals unless notice is given, and subject to termination rights in certain events. The Company has agreed to restrictions during the term and for two years thereafter in regard to solutions or services that are substantially similar to or competitive with certain solutions or services of Elutions, and each party has agreed not to hire the other party's employees during the same period.

The parties have agreed on a general framework for pursuing, entering into and implementing customer contracts, which includes providing for joint and separate client pursuits and marketing on an initial and ongoing basis, procedures for contracting with clients, procedures for interface between the parties, limited exclusivity requirements of Elutions relating to identified prospects and clients of the Company, intellectual property rights of Elutions to its products and related restrictions, restrictions regarding use of confidential information, limitations on liability of the parties, independent contractor status of the parties, limitations on publicity by the parties, and dispute resolution, including arbitration. The parties intend that specific pricing and allocation provisions and other specific commercial terms will be included in individual client statements of work, subject to mutually agreed gross margin requirements for the benefit of the Company. The parties also agreed to a framework for certain initial inventory orders and reorders by the Company from Elutions, and related commitments, timing and pricing procedures, when the Company is the prime contracting party under certain client statements of work. With respect to the required initial inventory order, the Company was required to purchase $3.0 million of inventory from Elutions upon receiving a booked order for Smart Building Services of a certain size from a customer. As a result of a customer agreement entered into by the Company, during the third quarter of fiscal 2014, the Company acquired $3.0 million in inventory from Elutions to fulfill its initial inventory commitment. As of July 1, 2017, the Company has not sold or licensed any of the initial inventory acquired from Elutions and has not acquired any additional inventory from Elutions.

Under the Market Development Agreement, if the Company had not sold 75% of such inventory acquired from Elutions within one year after acquisition, Elutions is required upon request of the Company to source its requirements for future projects in the U.S. or U.K. from such inventory subject to a 10% discount against the Company's purchase price until the Company has exhausted such inventory. In fiscal 2015, the Company requested that Elutions source its requirements for future projects from the inventory that was acquired by the Company from Elutions in July 2014. Management continues to work with Elutions to utilize the inventory and changes in management's expectations in future periods could impact the net realizable value of the inventory. See Note 1, Basis of Reporting for a discussion of the inventory recorded with respect to our agreements with Elutions.

Also under the Market Development Agreement, Elutions agreed to dedicate three full-time equivalent employees for the purpose of various functions related to the furtherance of the strategic alliance, and the Company agreed to fund the cost of the three full-time equivalent employees at a rate of $36,750 per month. Pursuant to the Market Development Agreement, the Company terminated the provision of the three full-time equivalent employees effective in March 2016. For the twenty-six weeks ended July 2, 2016, expense related to these dedicated employees was approximately $98,500.

In connection with the customer agreement entered into by the Company in 2014, the Company entered into a subcontract with Elutions. Under the subcontract, Elutions agreed to provide all services in accordance with the customer agreement except for project management services, to be provided by the Company. In January 2017, the Company entered into an amendment of the customer agreement and an amendment to the subcontract with Elutions. The amendments increase the number of customer sites deployed and extend the term of the original agreement. As of July 1, 2017, the Company estimates total additional license payments to Elutions under the amendment to the subcontract are approximately $0.3 million and that the total remaining license payments to Elutions under the original subcontract, as amended, are approximately $1.1 million over the term of the subcontract, with additional amounts potentially payable to Elutions based upon energy savings achieved by the customer. Annual license payments under the subcontract are recorded as managed services implementation costs which are included in Other current assets on the Condensed Consolidated Balance Sheets. See Note 1, Basis of Reporting. Elutions also agreed in the subcontract to provide all equipment required under the customer agreement, and the Company agreed to advance to Elutions $400,000 of the equipment deployment cost. The advance amount was paid to Elutions during fiscal 2014. Elutions is required to repay the advanced amount plus interest at the rate of 5.5% per annum. The funds are netted directly from the customer's annual payments. Annual payments to Elutions are paid during the third fiscal quarter of each fiscal year. As of July 1, 2017 and December 31, 2016, the balance remaining for the advance to Elutions was $100,000 and $200,000, respectively, of which $100,000 was included in Other current assets as of both July 1, 2017 and December 31, 2016, and $100,000 was included in Other noncurrent assets as of December 31, 2016, on the Condensed Consolidated Balance Sheets, respectively.

Accounting Treatment

The Holder Redemption Option was determined to be an embedded derivative liability that was required to be bifurcated and recorded as a liability.

In addition, the Company determined that the provision of the Note that permits Cartesian Limited to prepay the Note after 18 months if the trading price of the Company's common stock exceeds $5.50 per share for a specified period of time is an embedded derivative asset that requires bifurcation (the "Issuer Call Option"). As of July 1, 2017 and December 31, 2016, the fair value of the Issuer Call Option was determined to be immaterial. The carrying value of the Note as of July 1, 2017 and December 31, 2016 was $3,269,000 and as of July 1, 2017 and December 31, 2016, the fair value of the Note was $2,440,000 and $2,703,000, respectively. The Incentive Warrant and Tracking Warrant are accounted for as equity instruments. See Note 9, Fair Value Measurements for discussion of the determination of fair values.

The vesting of the Incentive Warrant is contingent on services to be provided by Elutions and the achievement of performance conditions by Elutions. During the thirteen weeks ended July 1, 2017 and July 2, 2016, Elutions earned 12,980 and 14,848 vested shares, respectively, under the Incentive Warrant and the Company recognized $34,000 and $27,000 of expense related to these vested shares, respectively. During the twenty-six weeks ended July 1, 2017 and July 2, 2016, Elutions earned 15,394 and 18,934 vested shares, respectively, under the Incentive Warrant and the Company recognized $40,000 and $34,000 of expense related to these vested shares, respectively.

4. Goodwill and Intangible Assets

The following table summarizes the changes in the major classes of intangible assets as of July 1, 2017 and December 31, 2016 (in thousands):

	Tradename	Non-Compete Agreements	Customer Relationships	Total
Gross Carrying Amount:				
Balance as of December 31, 2016	$ 71	$ 48	$ 881	$ 1,000
Changes in foreign currency exchange rates	4	3	46	53
Balance as of July 1, 2017	$ 75	$ 51	$ 927	$ 1,053
Accumulated Amortization:				
Balance as of December 31, 2016	$ (71)	$ (15)	$ (357)	$ (443)
Changes in foreign currency exchange rates	(4)	(1)	(23)	(28)
Amortization expense	—	(5)	(129)	(134)
Balance as of July 1, 2017	$ (75)	$ (21)	$ (509)	$ (605)

The identifiable intangible assets in the table above resulted from the July 2015 acquisition of the Farncombe Entities and include the effects of foreign currency translation. Tradename, non-compete agreements and customer relationships carry amortization periods of six months, four and one-half years and three and one-half years, respectively. The amortization periods are based on the period of expected cash flows used to measure the fair value of the intangible assets.

Aggregate amortization expense related to intangible assets was $68,000 and $76,000 for the thirteen weeks ended July 1, 2017 and July 2, 2016, respectively, and was $134,000 and $165,000 for the twenty-six weeks ended July 1, 2017 and July 2, 2016, respectively. The following table outlines the estimated future amortization expense related to amortizing intangible assets as of July 1, 2017 (in thousands):

2017 (July 2, 2017 – December 30, 2017)	$ 138
2018	276
2019	33
2020	1
	$ 448

5. Share-Based Compensation

The Company issues stock option awards and non-vested share awards under its share-based compensation plans. The key provisions of the Company's share-based compensation plans are described in Note 5, Share-Based Compensation, in the Notes to the Consolidated Financial Statements included in Item 8, Consolidated Financial Statements of the 2016 Form 10-K.

The Company recognized income tax benefits of $8,000 and $15,000 related to share-based compensation arrangements during the thirteen weeks and twenty-six weeks ended July 2, 2016. No income tax benefit was recognized in the first half of fiscal 2017 due to the full valuation allowance on the Company's deferred tax assets.

Equity Incentive Plan

In April 2015, our Board of Directors approved an amendment and restatement of the Company's Equity Incentive Plan (the "Equity Plan"), which was approved by our stockholders at the 2015 annual meeting of stockholders which was held on June 16, 2015. There are 2,805,659 shares of common stock that are available for issuance (inclusive of shares previously issued) under the Equity Plan. The Equity Plan expires on June 16, 2025.

Stock Options

Service-Based Stock Option Awards – A summary of the service-based stock option activity under the Equity Plan, as of July 1, 2017 and changes during the twenty-six weeks then ended is presented below:

	Shares	Weighted Average Exercise Price
Outstanding at December 31, 2016	212,762	$ 6.91
Granted	—	$ —
Forfeited/cancelled	(89,496)	$ 10.73
Outstanding at July 1, 2017	123,266	$ 4.13
Options vested and expected to vest at July 1, 2017	113,891	$ 4.34
Options exercisable at July 1, 2017	73,265	$ 5.72

The Company did not grant any service-based stock option awards during the twenty-six weeks ended July 1, 2017 or July 2, 2016. The Company recorded share-based compensation expense in connection with service-based stock option awards of $4,000 and $3,000 during the thirteen weeks ended July 1, 2017 and July 2, 2016, respectively and recorded $10,000 and $8,000 during the twenty-six weeks ended July 1, 2017 and July 2, 2016, respectively. As of July 1, 2017, there was approximately $15,000 of unrecognized share-based compensation expense, net of estimated forfeitures, related to service-based stock option awards, and this unrecognized expense is expected to be recognized over a weighted average period of 16 months. As of December 31, 2016, there was $26,000 of unrecognized share-based compensation expense, net of estimated forfeitures, related to service-based stock option awards.

Market Condition Stock Option Awards – A summary of the market condition stock option activity under the Equity Plan, as of July 1, 2017 and changes during the twenty-six weeks then ended is presented below:

	Shares	Weighted Average Exercise Price
Outstanding at December 31, 2016	325,000	$ 2.54
Granted	—	$ —
Outstanding at July 1, 2017	325,000	$ 2.54
Options vested and expected to vest at July 1, 2017	325,000	$ 2.54
Options exercisable at July 1, 2017	—	$ —

On September 28, 2016, the Company granted non-qualified stock options awards for 125,000 shares of the Company's common stock having an exercise price of $1.25 per share. On June 16, 2015 the Company granted a non-qualified stock option award for 200,000 shares of the Company’s common stock having an exercise price of $3.34 per share. Except with respect to the non-qualified stock option awards for 125,000 shares which also vest upon a change of control of the Company, these stock options will vest only if the price of the Company’s common stock reaches certain price targets, as follows:

- the stock options will vest with respect to 116,666 shares if at any time the closing market price of the Company’s common stock on each day during a 30 consecutive trading day period equals or exceeds $4.00 per share;
- the stock options will vest with respect to an additional 116,667 shares if at any time the closing market price of the Company’s common stock on each day during a 30 consecutive trading day period equals or exceeds $5.00 per share; and

- the stock options will vest with respect to an additional 91,667 shares if at any time the closing market price of the Company's common stock on each day during a 30 consecutive trading day period equals or exceeds $6.00 per share.

For stock options which contain market conditions, the market conditions are required to be considered when calculating the grant date fair value. FASB ASC 718 – *"Compensation – Stock Compensation",* requires us to select a valuation technique that best fits the circumstances of an award. In order to reflect the substantive characteristics of the market condition option award, a Monte Carlo simulation valuation model was used to calculate the grant date fair value of such stock options. Monte Carlo approaches are a class of computational algorithms that rely on repeated random sampling to compute their results. This approach allows the calculation of the value of such stock options based on a large number of possible stock price path scenarios. Expense for the market condition stock options is recognized over the derived service period as determined through the Monte Carlo simulation model. The fair value and derived service periods calculated by vesting tranche for the market condition stock option award granted in June 2015 were as follows:

	Grant Date Fair Value Per Share	Derived Service Period (in Trading Days)
$4.00 market condition tranche	$ 1.95	151
$5.00 market condition tranche	$ 1.95	262
$6.00 market condition tranche	$ 1.99	362

The fair value and derived service periods calculated by vesting tranche for the market condition stock option awards granted in September 2016 were as follows:

	Grant Date Fair Value Per Share	Derived Service Period (in Years)
$4.00 market condition tranche	$ 0.32	5.1
$5.00 market condition tranche	$ 0.31	5.5
$6.00 market condition tranche	$ 0.30	5.9

During the thirteen weeks ended July 1, 2017 and July 2, 2016 the Company recorded $2,000 and $51,000, respectively, of share-based compensation expense in connection with market condition stock option awards and during the twenty-six weeks ended July 1, 2017 and July 2, 2016, recorded $4,000 and $116,000, respectively. As of July 1, 2017, there was $34,000 of unrecognized share-based compensation expense, net of estimated forfeitures, related to the market condition stock option awards, and this unrecognized expense is expected to be recognized over a weighted average period of 22 months. As of December 31, 2016, there was $37,000 of unrecognized expense related to the market condition stock option awards.

Non-vested Shares

Service-Based Non-vested Share Awards – A summary of the status of service-based non-vested share awards issued under the Equity Plan, as of July 1, 2017 is presented below:

	Shares	Weighted Average Grant Date Fair Value per share
Outstanding at December 31, 2016	172,422	$ 0.71
Granted	60,000	$ 1.18
Vested	(132,422)	$ 0.71
Outstanding at July 1, 2017	100,000	$ 0.99

On March 13, 2017, the Company granted 60,000 shares of service-based non-vested stock that vest two years from the date of grant. On July 22, 2016, the Company granted 40,000 shares of service-based non-vested stock that vest one year from the date of grant. These service-based non-vested share awards are valued at the date of grant based on the closing market price of the Company's common stock, and are expensed using the straight-line method over the requisite service period (which is the vesting period of the award). During the thirteen weeks and twenty-six weeks ended July 1, 2017, the Company recorded $17,000 and $25,000, respectively, of stock-based compensation expense in connection with these service-based non-vested share awards. There was no stock-based compensation expense in connection with service-based non-vested share awards for the twenty-six weeks ended July 2, 2016. As of July 1, 2017 and December 31, 2016, there was an estimated $61,000 and $16,000, respectively, of unrecognized stock-based compensation expense, net of estimated forfeitures, related to these service-based non-vested share awards, and this unrecognized expense is expected to be recognized over a period of 15 months.

On July 22, 2016 and October 3, 2016, the Company also granted 59,922 and 72,500 shares, respectively, of service-based non-vested stock to non-employees for services provided under consulting agreements which had three-year terms. In accordance with ASC 718, the fair value measurement date for these non-vested stock awards is the performance completion date. The fair value of the awards granted to the non-employee consultants was remeasured each reporting period based on their fair value at that time up to the performance completion date. The changes in fair value each reporting period were recognized in the Condensed Consolidated Statements of Operations. Effective March 31, 2017, the consulting agreements were terminated and in accordance with the consulting agreements, all unvested shares of non-vested stock granted under those agreements vested as of March 31, 2017. During the twenty-six weeks ended July 1, 2017, the Company recorded $85,000 of stock-based compensation expense in connection with these service-based non-vested share awards.

Performance-Based Non-vested Share Awards – A summary of the status of performance-based non-vested share awards issued under the Equity Plan, as of July 1, 2017 is presented below:

	Shares	Weighted Average Grant Date Fair Value per share
Outstanding at December 31, 2016	172,657	$ 3.14
Forfeited/cancelled	(141,222)	$ 3.14
Outstanding at July 1, 2017	31,435	$ 3.17

On July 22, 2015, the Company granted 58,940 shares of non-vested stock to two employees that vests on July 1, 2017 in proportion to the Earn-Out consideration paid pursuant to the Purchase Agreement for the acquisition of the Farncombe Entities described in Note 2, Acquisition. Except for termination of employment in certain circumstances following a change of control, the unvested portion of an award is forfeited upon any termination of employment. Under the terms of the awards, vesting is accelerated upon a change of control of the Company. If the vesting percentage is less than 100% on the vesting date, that percentage of the non-vested stock that does not vest as of the vesting date shall be forfeited.

On April 8, 2013, the Company granted performance-based non-vested share awards for a total of 800,000 shares of Common Stock to various executive officers and employees of the Company that vested in proportion to the ratio that the Company's "Cumulative Net Non-GAAP EBITDA" achieved over a four-year performance period compared to the Cumulative Net Non-GAAP EBITDA goal of $14 million. All 800,000 non-vested shares had a grant date fair value of $3.14 per share. The first potential vesting date was the Company's earnings release date for its 2014 first fiscal quarter and each subsequent potential vesting date is each of the Company's quarterly earnings release dates thereafter through the release date for the first quarter of fiscal 2017. Shares not vested as of the release date for the first quarter of fiscal 2017 were forfeited.

Share-based compensation cost for performance-based non-vested share awards is measured at the grant date based on the fair value of shares expected to be earned at the end of the performance period, based on the closing market price of the Company's common stock on the date of grant, and is recognized as expense using the straight-line method over the performance period based upon the probable number of shares expected to vest. The Company estimates and excludes compensation cost related to awards not expected to vest based upon estimated forfeitures. During the thirteen weeks ended July 1, 2017 and July 2, 2016, the Company recorded share-based compensation income of $156,000 and share-based compensation expense in the amount of $3,000, respectively, in connection with performance-based non-vested share awards. During the twenty-six weeks ended July 1, 2017 and July 2, 2016, the Company recorded share-based compensation income of $146,000 and share-based compensation expense in the amount of $53,000, respectively, in connection with performance-based non-vested share awards. As of July 1, 2017, based on management's assessment of the probability of achievement of the performance conditions, there was an estimated $2,000 of unrecognized share-based compensation expense, net of estimated forfeitures, related to performance-based non-vested share awards. Unrecognized compensation cost at July 1, 2017 related to performance-based non-vested share awards is expected to be recognized over a period of 1 month.

2000 Supplemental Stock Plan

A summary of the option activity under the Company's 2000 Supplemental Stock Plan (the "Supplemental Stock Plan") as of July 1, 2017 and changes during the twenty-six weeks then ended is presented below:

	Shares	Weighted Average Exercise Price
Outstanding at December 31, 2016	30,100	$ 11.06
Forfeited/cancelled	(22,200)	$ 11.61
Outstanding at July 1, 2017	7,900	$ 9.50
Options vested and exercisable at July 1, 2017	7,900	$ 9.50

No awards have been granted under the Supplemental Stock Plan since it expired on May 23, 2010. There is no remaining unrecognized compensation cost related to stock options issued under the Supplemental Stock Plan.

6. Supplemental Balance Sheet Information

Accrued payroll, bonuses and related expenses and Other accrued liabilities consist of the following (amounts in thousands):

	July 1, 2017	December 31, 2016
Accrued payroll, bonuses and related expenses		
Accrued payroll	$ 266	$ 313
Accrued bonuses	349	2,060
Accrued payroll taxes	593	515
Accrued vacation	985	494
Accrued severance	15	117
Other	247	253
	$ 2,455	$ 3,752
Other accrued liabilities		
Sales and value-added taxes payable	$ 577	$ 911
Lease termination liability	132	103
Accrued income taxes	4	152
Accrued acquisition consideration	—	32
Other	495	919
	$ 1,208	$ 2,117

7. Business Segments and Major Customers

The Company identifies its segments based on the way management organizes the Company to assess performance and make operating decisions regarding the allocation of resources. In accordance with the criteria in FASB ASC 280, "*Segment Reporting*", the Company has concluded it has three reportable segments: the North America segment, the EMEA segment and the Strategic Alliances segment. The North America and EMEA segments are both single reportable, operating segments that encompass the Company's operational, technology and software consulting services inside of North America and outside of North America, respectively. Both reportable segments offer management consulting, custom developed software, and technical services. The Strategic Alliances reportable segment is a single, reportable segment that includes the Company's world-wide commercial activities undertaken with third party service or solutions providers.

Management evaluates segment performance based upon income (loss) from operations, excluding share-based compensation (benefits) and depreciation. There were no inter-segment revenues during the twenty-six weeks ended July 1, 2017 or July 2,

2016. In addition, in its administrative division, entitled "Not Allocated to Segments," the Company accounts for non-operating activity and the costs of providing corporate and other administrative services to all the segments, including, but not limited to, share-based compensation expense, depreciation expense, goodwill impairment and certain research and development costs. Summarized financial information concerning the Company's reportable segments is shown in the following table (amounts in thousands):

	North America	EMEA	Strategic Alliances	Not Allocated to Segments	Total
As of and for the twenty-six weeks ended July 1, 2017:					
Revenues	$ 9,344	$ 17,623	$ 297	$ —	$ 27,264
Income (loss) from operations	1,229	1,822	(35)	(5,961)	(2,945)
Total assets	$ 3,844	$ 9,117	$ 330	$ 7,503	$ 20,794
As of and for the thirteen weeks ended July 1, 2017:					
Revenues	$ 4,266	$ 8,583	$ 149	$ —	$ 12,998
Income (loss) from operations	501	712	(62)	(2,570)	(1,419)
As of the fiscal year ended December 31, 2016:					
Total assets	$ 3,378	$ 10,113	$ 550	$ 8,660	$ 22,701
As of and for the twenty-six weeks ended July 2, 2016:					
Revenues	$ 16,038	$ 22,922	$ 256	$ —	$ 39,216
Income (loss) from operations	3,357	3,062	(134)	(19,804)	(13,519)
Total assets	$ 6,031	$ 9,466	$ 694	$ 10,039	$ 26,230
As of and for the thirteen weeks ended July 2, 2016:					
Revenues	$ 7,525	$ 11,220	$ 154	$ —	$ 18,899
Income (loss) from operations	1,603	1,585	(58)	(15,905)	(12,775)

Segment assets, regularly reviewed by management as part of its overall assessment of the segments' performance, include both billed and unbilled trade accounts receivable, net of allowances, inventory, and certain other assets, if applicable. Assets not assigned to segments include cash and cash equivalents, current and non-current investments, property and equipment, goodwill, intangible assets and deferred tax assets, excluding deferred tax assets recognized on accounts receivable reserves, which are assigned to their segments.

In accordance with the provisions of FASB ASC 280-10, revenues earned in the United States and internationally based on the location where the services are performed are shown in the following table (amounts in thousands):

	For the Thirteen Weeks Ended		For the Twenty-six Weeks Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
United States	$ 4,758	$ 7,935	$ 10,052	$ 16,650
International:				
United Kingdom	7,193	10,118	15,347	21,078
Other	1,047	846	1,865	1,488
Total	$ 12,998	$ 18,899	$ 27,264	$ 39,216

In accordance with the provisions of FASB ASC 280-10, long-lived assets, excluding intangible assets, by geographic area are shown in the following table (amounts in thousands):

	Long-Lived Assets	
	July 1, 2017	December 31, 2016
United States	$ 2,532	$ 2,154
United Kingdom	172	217
France	11	10
Total	$ 2,715	$ 2,381

Major customers in terms of significance to Cartesian's revenues (i.e. in excess of 10% of revenues) and accounts receivable were as follows (amounts in thousands):

	Revenues			
	For the Twenty-six weeks ended July 1, 2017		For the Twenty- six weeks ended July 2, 2016	
	North America	EMEA	North America	EMEA
Customer A		$ 7,650		$ 8,478
Customer B	$ 4,420		$ 6,474	
Customer C		1,318		$ 5,407

	Revenues			
	For the Thirteen weeks ended July 1, 2017		For the Thirteen weeks ended July 2, 2016	
	North America	EMEA	North America	EMEA
Customer A	—	$ 3,699	—	$ 4,052
Customer B	$ 1,911	—	$ 3,201	—

	Accounts Receivable	
	As of July 1, 2017	As of July 2, 2016
Customer A	$ 3,186	$ 2,393
Customer B	$ 1,529	$ 1,624
Customer C	$ 704	$ 1,584

Revenues from the Company's ten most significant customers accounted for approximately 77.5% and 79.0% of revenues during the thirteen weeks ended July 1, 2017 and July 2, 2016, respectively and 79.9% and 81.2% of revenues for the twenty-six weeks ended July 1, 2017 and July 2, 2016, respectively.

8. Income Taxes

During the thirteen weeks ended July 1, 2017 the Company recorded an income tax benefit of $43,000 and during the thirteen weeks ended July 2, 2016, the Company recorded an income tax provision of $10,000. During the twenty-six weeks ended July 1, 2017, the Company recorded an income tax benefit of $72,000 and during the twenty-six weeks ended July 2, 2016, the Company recorded an income tax provision of $132,000. The income tax benefit for the thirteen weeks twenty-six weeks ended July 1, 2017 is primarily related to refinements of the projected 2016 U.K. tax liabilities. The income tax provision for the thirteen weeks and twenty-six weeks ended July 2, 2016 was primarily related to the generation of pre-tax book income within the Company’s U.K. operations in addition to deferred taxes recognized on goodwill amortized for income tax purposes but not for financial reporting purposes in fiscal 2016.

The Company has reserved all of its domestic and international net deferred tax assets as of July 1, 2017 and December 31, 2016 with a valuation allowance in accordance with the provisions of FASB ASC 740, “*Income Taxes*”, which requires an estimation of the recoverability of the recorded income tax asset balances. As of July 1, 2017 and December 31, 2016, the Company has recorded $37.2 million and $36.6 million, respectively, of valuation allowances attributable to its net deferred tax assets. The determination of recording and releasing valuation allowances against deferred tax assets is made, in part, pursuant to the Company’s assessment as to whether it is more likely than not that the Company will generate sufficient future taxable income against which benefits of the deferred tax assets may or may not be realized. Significant judgment is required in making estimates regarding the Company’s ability to generate income in future periods.

Realization of deferred tax assets is dependent on generating sufficient income in future periods. In evaluating the ability to use its deferred tax assets, the Company considers all positive and negative evidence including the Company's past operating results, the existence of cumulative losses in the most recent three fiscal years and the Company's forecast of future income. In determining future income, the Company is responsible for assumptions utilized including the amount of state, federal and international operating income, the reversal of temporary differences and the implementation of feasible and prudent tax planning strategies. These assumptions require significant judgment about the forecasts of future income and are consistent with the plans and estimates the Company is using to manage the underlying business.

The Company analyzes its uncertain tax positions pursuant to the provisions of FASB ASC 740 “*Income Taxes*”. There was no material activity related to the liability for uncertain tax positions during the twenty-six weeks ended July 1, 2017 and July 2, 2016, and the Company has determined it does not have any material uncertain tax positions requiring reserves at July 1, 2017 or December 31, 2016.

The Company or one of its subsidiaries files income tax returns in the U.S. federal jurisdiction, and in various states and foreign jurisdictions. With few exceptions, the Company is no longer subject to U.S. federal, state and local, or non-U.S. income tax examinations by tax authorities for years before 2000. As of July 1, 2017, the Company has no income tax examinations in process.

9. Fair Value Measurements

The Company utilizes the methods of fair value measurement as described in FASB ASC 820, *“Fair Value Measurements”* to value its financial assets and liabilities, including the financial instruments issued in the transaction described in Note 3, Strategic Alliance and Investment by Elutions, Inc. and the contingent consideration liability described in Note 2, Acquisition. As defined in FASB ASC 820, fair value is based on the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In order to increase consistency and comparability in fair value measurements, FASB ASC 820 establishes a fair value hierarchy that prioritizes observable and unobservable inputs used to measure fair value into three broad levels, which are described below:

Level 1: Quoted prices (unadjusted) in active markets that are accessible at the measurement date for assets or liabilities. The fair value hierarchy gives the highest priority to Level 1 inputs.

Level 2: Observable prices that are based on inputs not quoted on active markets, but corroborated by market data.

Level 3: Unobservable inputs are used when little or no market data is available. The fair value hierarchy gives the lowest priority to Level 3 inputs.

In determining fair value, the Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible as well as considers counterparty credit risk in its assessment of fair value.

Recurring Fair Value Measurements

The fair value of the Company’s Note and the Holder Redemption Option were determined using a binomial lattice model. (See Note 3, Strategic Alliance and Investment by Elutions, Inc., for further discussion of the Note and Holder Redemption Option.) The Holder Redemption Option was determined to be an embedded derivative liability that was required to be bifurcated and recorded as a liability.

The Company has classified the Holder Redemption Option and Note as Level 3 liabilities. Changes in the fair value of the Holder Redemption Option are recognized in the Condensed Consolidated Statements of Operations and Comprehensive Loss. The Company reassesses the fair value of this liability on a quarterly basis. Based on that assessment, the Company recognized a decrease of $69,000 in the fair value of this liability during the thirteen weeks ended July 1, 2017 and recognized an increase of $122,000 in the fair value of this liability during the thirteen weeks ended July 2, 2016. The Company recognized a decrease of $142,000 in the fair value of this liability during the twenty-six weeks ended July 1, 2017 and recognized an increase of $49,000 during the twenty-six weeks ended July 2, 2016. To determine the fair value of the Holder Redemption Option, management evaluates assumptions that require significant judgment. Changes in certain inputs to the valuation model, including the Company's period end stock price and stock volatility, can have a significant impact on the estimated fair value. The fair value recorded for the Holder Redemption Option may vary significantly from period to period. This variability may result in the actual liability for a period either above or below the estimates recorded in the Company's consolidated financial statements, resulting in significant fluctuations in other income (expense) as a result of the corresponding non-cash gain or loss recorded. The model requires the following inputs: (i) price of the Company's common stock; (ii) the expected life of the instrument or derivative; (iii) risk-free interest rate; (iv) estimated dividend yield, and (v) estimated stock volatility. Assumptions used in the calculation require significant management judgment.

The following table sets forth the Level 3 inputs to the binomial lattice model that were used to determine the fair value of the Note and the Holder Redemption Option:

	July 1, 2017	December 31, 2016
Common stock price	$ 0.75	$ 0.91
Dividend yield	—%	—%
Credit spread	25.0%	16.0%
Risk-free interest rate	1.3%	1.3%
Estimated stock volatility	94.9%	77.3%

In addition, the Company determined that the provision of the Note that permits Cartesian Limited to prepay the Note after 18 months if the trading price of the Company's common stock exceeds $5.50 per share for a specified period of time is an embedded derivative asset that requires bifurcation (the "Issuer Call Option"). As of July 1, 2017 and December 31, 2016, the fair value of the Issuer Call Option was determined to be immaterial.

Because the Company measures the Holder Redemption Option at fair value on a recurring basis, transfers, if any, between the levels of the fair value hierarchy are recognized at the end of the fiscal quarter in which the change in circumstances that caused the transfer occurred.

In connection with the acquisition of the Farncombe Entities, the Company recorded a liability related to the Earn-Out portion of the purchase consideration. As of December 31, 2016, the Company had classified the Earn-Out liability as a Level 3 liability and the fair value of the Earn-Out liability is evaluated each reporting period and changes in its fair value are included in the Company's results of operations. As of December 31, 2016, the fair value of the Earn-Out liability was calculated using a Monte Carlo simulation using a risk-adjusted discount rate applied to management's estimate of forecasted revenues that are eligible under the Earn-Out as described in the Purchase Agreement. To determine the fair value of the Earn-Out liability, management evaluated assumptions that required significant judgment.

On April 17, 2017, the Company entered into a Letter Agreement with the former shareholders of the Farncombe Entities whereby the parties agreed to a final determination of the Earn-Out, that the Earn-Out target was expected to be achieved, and that the Company would pay 100% of the Earn-Out consideration described above to the Sellers. As of July 1, 2017, the Earn-Out liability is recorded in the amount payable as described in the Letter Agreement. Subsequent to the end of second quarter of fiscal 2017, the Earn-Out was paid in full. See Note 2, Acquisition, for further discussion of the Earn-Out liability.

Because the Company measured the Earn-Out liability at fair value on a recurring basis, transfers, if any, between the levels of the fair value hierarchy are recognized at the end of the fiscal quarter in which the change in circumstances that caused the transfer occurred. There were no transfers between Level 1, 2 or 3 liabilities during the twenty-six weeks ended July 1, 2017 or during the fiscal year ended December 31, 2016.

As of July 1, 2017 and December 31, 2016, liabilities recorded at fair value on a recurring basis consist of the following (in thousands):

	Total	Quoted prices in active markets Level 1	Significant other observable inputs Level 2	Significant other unobservable inputs Level 3
July 1, 2017:				
Holder Redemption Option	$ 828	$ —	$ —	$ 828
December 31, 2016:				
Holder Redemption Option	$ 970	$ —	$ —	$ 970
Earn-Out Liability	$ 1,903	$ —	$ —	$ 1,903

The following table summarizes the year-to-date changes to the fair value of the Holder Redemption Option which is a Level 3 liability (in thousands):

	Holder Redemption Option
Fair value at December 31, 2016	$ 970
Decrease in fair value	(142)
Fair value at July 1, 2017	$ 828

Other Fair Value Disclosures

The carrying amounts of cash and cash equivalents, accounts receivable, accounts payable and accrued expenses approximate their fair values because of the relatively short-term maturities of these financial instruments.

10. Commitments and Contingencies

The Company is not subject to any material litigation as of July 1, 2017. However, the Company may become involved in various legal and administrative actions arising in the normal course of business. These could include actions brought by taxing authorities challenging the employment status of consultants utilized by the Company. In addition, future customer bankruptcies could result in additional claims on collected balances for professional services near the bankruptcy filing date. When management has determined that it is probable that an asset has been impaired or a liability had been incurred related to an action, claim or assessment and the amount of loss can be reasonably estimated, the Company will record a liability for such estimated loss in the appropriate accounting period. The resolution of any of such actions, claims, or the matters described above may have an impact on the financial results for the period in which they occur.

During the first quarter of fiscal 2015, the Company renewed an agreement under which it had a commitment to purchase a minimum of $412,000 in computer software over a three-year period. During the first quarter of fiscal 2016, the Company amended the agreement to include an additional commitment of $95,000 over a two-year period. As of December 31, 2016, the Company had an obligation of $181,000 remaining under this commitment. These amounts were paid during the first quarter of fiscal 2017.

In conjunction with the acquisition of the Farncombe Entities on July 22, 2015, the Company has recognized a liability of $2,268,000 related to Earn-Out consideration payable to the former shareholders of the Farncombe Entities. See Note 2, Acquisition for a discussion of the Earn-Out consideration.

11. Common Stock Repurchase Program

On June 7, 2016, the Board of Directors of the Company (the "Board") authorized an amendment to the Company's previously-announced stock repurchase program to extend the program through June 30, 2017. The program was initially authorized in February 2014 and was extended in June 2015. The program authorizes the Company to repurchase up to $2 million of Company common stock. Under the program, repurchases may be made by the Company from time to time in the open market or through privately negotiated transactions depending on market conditions, share price and other factors. The stock repurchase program may be modified or discontinued at any time by the Board of Directors. The Company expects to fund future repurchases, if any, through cash on hand, future cash flow from operations and future borrowings. The Company did not repurchase any shares under the stock repurchase program during the twenty-six weeks ended July 1, 2017 or July 2, 2016. The program expired on June 30, 2017.

12. Exit and Disposal Activities

In fiscal 2015, the Company took steps to discontinue use of its leased facilities in McLean, Virginia. The space is leased under an operating lease with a term expiring in July 2019. It is comprised of 4,823 square feet. Although the Company has clients in this geographic market, projects are performed from either client sites or other Company locations, and thus the space is not required or used by Company employees, and specifically not used for revenue-generating activities. In March 2017, the Company entered into a sublease for this facility. The sublease does not relieve the Company of its primary obligations under the original lease. We accounted for the discontinuation of use of this property in accordance with FASB ASC 420, "*Exit or Disposal Cost Obligations"* and as such recorded a liability during fiscal year 2015. As of July 1, 2017, a liability of $202,000 is recorded of which $132,000 is recorded in Other accrued liabilities and $70,000 is recorded in Other noncurrent liabilities in the Condensed Consolidated Balance Sheets. As of December 31, 2016, a liability of $185,000 was recorded of which $103,000 was included in Other accrued liabilities and $82,000 was included in Other noncurrent liabilities in the Condensed Consolidated Balance Sheets. The amount recorded as of December 31, 2016, was calculated using probability-weighted cash flow analysis and represents the present value, calculated using a credit-adjusted risk free rate, of our remaining costs under the remaining term of the lease, net of sublease payments.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Cartesian Inc. and its subsidiaries are referred to herein as "Cartesian", "we," "us," "our" or the "Company".

Cautionary Statement Regarding Forward-Looking Statements. In addition to historical information, this quarterly report contains forward-looking statements. Forward-looking statements include, but are not limited to, statements of plans and objectives, statements of future economic performance or financial projections, statements of assumptions underlying such statements, and statements of the Company's or management's intentions, hopes, beliefs, expectations or predictions of the future. Forward-looking statements can often be identified by the use of forward-looking terminology, such as "believes", "expects", "may", "should", "could", "intends", "plans", "estimates" or "anticipates", variations thereof or similar expressions. Certain risks and uncertainties could cause actual results to differ materially from those reflected in such forward-looking statements. Factors that might cause a difference include, but are not limited to, our ability to generate sufficient cash flow from operations and obtain sufficient financing to pay our Note issued to Elutions if called for redemption by Elutions, our ability to successfully implement the strategic relationship with Elutions, conditions in the industry sectors that we serve, including the slowing of client decisions on proposals and project opportunities along with scope reduction of existing projects, overall economic and business conditions, our ability to retain the limited number of large clients that constitute a major portion of our revenues, our ability to protect client or Cartesian data or information systems from security breaches and cyber-attacks, technological advances and competitive factors in the markets in which we compete, foreign currency exchange rate fluctuations and the factors discussed in Item 1A. Risk Factors and the section entitled "Cautionary Statement Regarding Forward-Looking Information" in Part I of our Annual Report on Form 10-K for the fiscal year ended December 31, 2016 ("2016 Form 10-K"). Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect management's opinions only as of the date of this report. Except as may be required by applicable law, we undertake no obligation to revise, or publicly release the results of any revision to, these forward-looking statements. Readers should carefully review the cautionary statements contained in our 2016 Form 10-K and in other documents that we file from time to time with the Securities and Exchange Commission.

The following should be read in connection with Management's Discussion and Analysis of Financial Condition and Results of Operations as presented in our 2016 Form 10-K.

OVERVIEW

Cartesian is among the leading providers of consulting services and managed solutions to the global leaders in the communications, digital media, and technology sectors. We offer a portfolio of strategy, management, marketing, operational, and technology consulting services. We have consulting experience with almost all major aspects of managing a global communications company. Our portfolio of solutions includes proprietary methodologies and toolsets, deep industry experience, and hands-on operational expertise.

Our global investments in targeting the cable industry have positioned our business to better serve consolidating telecommunications carriers and the converging global media and entertainment companies. The convergence of communications with media and entertainment, the pace of technological change in the sector, and the consolidation of large telecommunications carriers have required us to focus our strategy on serving our clients in both North America and European markets, continuing to expand our offerings with software and strengthening our position within the large carriers and media and entertainment companies. Subject to the effects of cyclical economic conditions, our efforts are helping us build what we believe is a more sustainable revenue model over the long-term, which will enable us to expand our global presence. We continue to focus our efforts on identifying, adapting to and capitalizing on the changing dynamics prevalent in the converging communications, media and entertainment industries, as well as providing our wireless and IP services within the communications sector.

On July 22, 2015, we entered into a Share Purchase Agreement (the "Purchase Agreement") and completed the acquisition of all of the outstanding shares of capital stock of Farncombe France SARL and Farncombe Technology Limited (collectively, the "Farncombe Entities"). The Farncombe Entities operate primarily in the U.K. and Europe and are in the business of providing strategic consultancy, content security, testing and implementation services for broadcast and broadband internet digital television. The leaders and consultants of the Farncombe Entities are known experts in video, digital rights, content and security across multiple platforms, including broadcast, mobile and broadband networks. In addition to serving a complementary client base, the Farncombe Entities position Cartesian to support the growing digital TV needs of communications service providers. We currently expect the acquisition to provide cross-selling and upselling opportunities across our combined customer base, particularly in strategy and analytics. The global payTV market exceeds more than $250 billion annually and continues to grow steadily. Convergence of content across digital media platforms is increasingly important in markets across the globe. Ensuring a high quality, seamless viewing experience along with the security of content is a requirement to compete effectively. Farncombe's experience in these areas along with Cartesian's strategic, operational and technical capabilities in serving global service providers strengthens the Company's ability to support convergence and quad play offerings in this growing market.

Strategic alliance partnerships are an element of our strategy. In 2014, we entered into a strategic alliance and Investment Agreement with Elutions, Inc. ("Elutions"), a provider of operational business intelligence solutions. With regard to the commercial relationship, Elutions is a provider of smart building and smart asset management solutions for energy management. Elutions uniquely combines technology and expertise to enable a machine-to-machine automated control and optimization of commercial and technical sites in a manner that can deliver significant energy savings with existing building infrastructure by optimizing use. Elutions' end-to-end solution includes web-enabled application software, wireless and wireline networking hardware, energy management bureau services and engineering and integration services. In the communications sector that we primarily serve, energy consumption is a large and often sub-optimized component of operating costs and an area that continues to escalate as service providers invest in areas like datacenters. In the partnership with Elutions, Cartesian may provide: lead generation to Elutions; sales and marketing support, program management and potentially prime certain transactions with our clients.

Our financial results are affected by macroeconomic conditions, industry conditions, credit market conditions, and the overall level of business confidence. Economic volatility has continued to impact our customer base and has resulted in continued higher levels of unemployment in certain markets, which may have impacted financial results of our customers.

The rate of change in the communications industry, driving convergence of media and telecommunications, consolidation of providers and expanded deployment of wireless capabilities have added both opportunity and uncertainty for our clients. Consolidation within the sector tends to result in increased consolidation of competitors. The supply chain divisions within larger clients, given sector consolidation, also tend to reduce the number of vendors utilized and to negotiate volume programs with select preferred vendors. This activity could result in further price reductions, fewer client projects, under-utilization of consultants, reduced operating margins and loss of market share. Declines in our revenues can have a significant impact on our financial results. Although we have a flexible cost base comprised primarily of employee and related costs, there is a lag in time required to scale the business appropriately if revenues are reduced. In addition, our future revenues and operating results may fluctuate from quarter to quarter based on the number, size and scope of projects in which we are engaged, the contractual terms and degree of completion of such projects, any delays incurred in connection with a project, consultant utilization rates, general economic conditions and other factors.

Our sales strategy focuses on building long-term relationships with both new and existing clients. Strategic alliances with other companies are also used to sell services. The volume of work performed for specific clients may vary from period to period and a major client from one period may not use our services or the same volume of services in another period. In addition, clients generally may end their engagements with little or no penalty or notice. If a client consulting engagement ends earlier than expected, we must re-deploy professional service personnel as any resulting non-billable time could harm margins.

Cost of services consists primarily of compensation for consultants who are employees as well as fees paid to independent contractor organizations and related expense reimbursements. Employee compensation includes certain non-billable time, training, vacation time, benefits and payroll taxes. Gross margins are primarily impacted by the type of consulting services provided; the size of service contracts and negotiated discounts; changes in our pricing policies and those of competitors; utilization rates of consultants and independent subject matter experts; and employee and independent contractor costs, which tend to be higher in a competitive labor market.

Sales and marketing expenses consist primarily of personnel salaries, bonuses, and related costs for direct client sales efforts and marketing staff. We primarily use a relationship sales model in which partners, principals and senior consultants generate revenues. In addition, sales and marketing expenses include costs associated with marketing collateral, product development, trade shows and advertising. General and administrative expenses consist mainly of costs for personnel, information technology, insurance, rent and outside professional services incurred in the normal course of business.

We are subject to a number of significant risks in the operation of our business, including operational, strategic, financial and regulatory risks. These include risks related to legal compliance, financial performance and condition, liquidity, concentration of credit, protection of our information technology networks and systems and intellectual property, counterparty credit and performance risk and other risks. Our Board of Directors has delegated to the Audit Committee, consisting solely of independent directors, the responsibility to oversee the assessment and management of the Company's risks, including reviewing management's risk assessment and risk management policies and procedures and steps management has taken to control material risk exposures. The Audit Committee is authorized to identify and discuss with management, the Board of

Directors and the independent auditors the material risks faced by our business or which could impact our financial condition or performance, evaluate how those risks are managed and the quality and adequacy of our reporting with regard to them. Although we have processes and procedures to attempt to mitigate many of the risks that we face, there can be no assurance that such processes or procedures will be successful. For a discussion of certain risks relating to the Company, see Item 1A, "Risk Factors" and Part I, "Cautionary Statement Regarding Forward-Looking Information" in the 2016 Form 10-K.

CRITICAL ACCOUNTING POLICIES

While the selection and application of any accounting policy may involve some level of subjective judgments and estimates, we believe the following accounting policies are the most critical to our condensed consolidated financial statements, potentially involve the most subjective judgments in their selection and application, and are the most susceptible to uncertainties and changing conditions:

- Impairment of Long-lived Assets;
- Revenue Recognition;
- Fair Value Measurement;
- Accounting for Income Taxes;
- Research and Development and Software Development Costs;
- Inventory; and
- Share-based Compensation Expense.

Impairment of Long-lived Assets – Identifiable intangible assets, resulting from the acquisition of the Farncombe Entities, consist of customer relationships, agreements not to compete, and a trade name. We amortize the identifiable intangible assets over their estimated economic benefit period, from six months to four and one-half years. In accordance with FASB ASC 360, "*Property, Plant and Equipment*," we use our best estimates based upon reasonable and supportable assumptions and projections to review for impairment of long-lived assets to be held and used whenever events or changes in circumstances indicate that the carrying amount of our assets might not be recoverable. If we were to determine that events and circumstances warrant a change to the estimate of an identifiable intangible asset's remaining useful life, then the remaining carrying amount of the identifiable intangible asset would be amortized prospectively over that revised remaining useful life. Additionally, information resulting from other events and circumstances may indicate that the carrying value of one or more identifiable intangible assets is not recoverable which would result in recognition of an impairment charge.

A change in the estimate of the remaining life of one or more identifiable intangible assets or the impairment of one or more identifiable intangible assets could have a material impact on our results of operations and financial condition. Our identifiable intangible assets' carrying value, net of amortization, was approximately $0.4 million as of July 1, 2017.

Revenue Recognition – We recognize revenues from time and materials consulting contracts in the period in which our services are performed. We recognized $5.8 million and $7.6 million in revenues from time and materials contracts during the thirteen weeks ended July 1, 2017 and July 2, 2016, respectively. We recognized $11.4 million and $14.7 million in revenues from time and materials contracts during the twenty-six weeks ended July 1, 2017 and July 2, 2016, respectively. In addition to time and materials contracts, we also enter into fixed fee contracts. We recognize revenues on milestone or deliverables-based fixed fee contracts and time and materials contracts not to exceed contract price using the percentage of completion-like method described by FASB ASC 605-35, "*Revenue Recognition – Construction-Type and Production-Type Contracts*". For fixed fee contracts where services are not based on providing deliverables or achieving milestones, we recognize revenues on a straight-line basis over the period during which such services are expected to be performed. During the thirteen weeks ended July 1, 2017 and July 2, 2016, we recognized $7.2 million and $11.4 million in revenues on fixed fee contracts, respectively. During the twenty-six weeks ended July 1, 2017 and July 2, 2016, we recognized $15.9 million and $24.5 million in revenues on fixed fee contracts, respectively. In connection with some fixed fee contracts, we receive payments from customers that exceed recognized revenues. We record the excess of receipts from customers over recognized revenue as deferred revenue. Deferred revenue is classified as a current liability to the extent it is expected to be earned within twelve months from the date of the balance sheet.

The FASB ASC 605-35 percentage-of-completion-like methodology involves recognizing revenue using the percentage of services completed, on a current cumulative cost to total cost basis, using a reasonably consistent profit margin over the period. Due to the longer term nature of these projects, developing the estimates of costs often requires significant judgment. Factors that must be considered in estimating the progress of work completed and ultimate cost of the projects include, but are not limited to, the availability of labor and labor productivity, the nature and complexity of the work to be performed, and the impact of delayed performance. If changes occur in delivery, productivity or other factors used in developing the estimates of costs or revenues, we revise our cost and revenue estimates, which may result in increases or decreases in revenues and costs, and such revisions are reflected in income in the period in which the facts that give rise to that revision become known.

Fair Value Measurement – We utilize the methods of fair value measurement as described in FASB ASC 820, *"Fair Value Measurements"* to value our financial assets and liabilities, including the financial instruments issued in the transaction described in Note 3, Strategic Alliance and Investment by Elutions, Inc. and the contingent consideration liability described in Note 2, Acquisition in the Notes to the Condensed Consolidated Financial Statements (Unaudited) included in Item 1, Condensed Consolidated Financial Statements (Unaudited), of this report. As defined in FASB ASC 820, fair value is based on the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In order to increase consistency and comparability in fair value measurements, FASB ASC 820 establishes a fair value hierarchy that prioritizes observable and unobservable inputs used to measure fair value into three broad levels, which are described below:

Level 1: Quoted prices (unadjusted) in active markets that are accessible at the measurement date for assets or liabilities. The fair value hierarchy gives the highest priority to Level 1 inputs.

Level 2: Observable prices that are based on inputs not quoted on active markets, but corroborated by market data.

Level 3: Unobservable inputs are used when little or no market data is available. The fair value hierarchy gives the lowest priority to Level 3 inputs.

In determining fair value, the Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible as well as considers counterparty credit risk in its assessment of fair value.

Accounting for Income Taxes – Accounting for income taxes requires significant estimates and judgments on the part of management. Such estimates and judgments include, but are not limited to, the effective tax rate anticipated to apply to tax differences that are expected to reverse in the future, the sufficiency of taxable income in future periods to realize the benefits of net deferred tax assets and net operating losses currently recorded and the likelihood that tax positions taken in tax returns will be sustained on audit. We account for income taxes in accordance with FASB ASC 740 "*Income Taxes*". As required by FASB ASC 740, we record deferred tax assets or liabilities based on differences between financial reporting and tax basis of assets and liabilities using currently enacted rates that will be in effect when the differences are expected to reverse. FASB ASC 740 also requires that deferred tax assets be reduced by a valuation allowance if it is more likely than not that some portion or all of the deferred tax asset will not be realized. As of July 1, 2017, cumulative valuation allowances in the amount of $37.2 million were recorded in connection with domestic and international net deferred income tax assets.

As required by FASB ASC 740, we have performed a comprehensive review of our portfolio of uncertain tax positions in accordance with recognition standards established by the guidance. Pursuant to FASB ASC 740, an uncertain tax position represents our expected treatment of a tax position taken in a filed tax return, or planned to be taken in a future tax return, that has not been reflected in measuring income tax expense for financial reporting purposes. As of July 1, 2017, we have no recorded liability for unrecognized tax benefits.

We have generated substantial deferred income tax assets related to our domestic operations, and to a lesser extent our international operations, primarily from the accelerated financial statement write-off of goodwill, the charge to compensation expense taken for stock options and net operating losses. Within our foreign operations, mostly domiciled within the United Kingdom, we have generated deferred tax assets primarily from the charge to compensation expense for stock options and operating losses. For us to realize the income tax benefit of these assets in the applicable jurisdiction, we must generate sufficient taxable income in future periods when such deductions are allowed for income tax purposes. In some cases where deferred taxes were the result of compensation expense recognized on stock options, our ability to realize the income tax benefit of these assets is also dependent on our share price increasing to a point where these options have intrinsic value at least equal to the grant date fair value and are exercised. In assessing whether a valuation allowance is needed in connection with our deferred income tax assets, we have evaluated our ability to generate sufficient taxable income in future periods to utilize the benefit of the deferred income tax assets. We continue to evaluate our ability to use recorded deferred income tax asset balances. If we continue to report operating losses for financial reporting in future years, no additional tax benefit would be recognized for those losses, since we will not have accumulated enough positive evidence to support our ability to utilize net operating loss carry-forwards in the future.

International operations have become a significant part of our business. As part of the process of preparing our financial statements, we are required to estimate our income taxes in each of the jurisdictions in which we operate. We utilize a "cost plus fixed margin" transfer pricing methodology as it relates to inter-company charges for headquarters support services performed by our domestic entities on behalf of various foreign affiliates. The judgments and estimates used are subject to challenge by domestic and foreign taxing authorities. It is possible that such authorities could challenge those judgments and estimates and draw conclusions that would cause us to incur liabilities in excess of those currently recorded. We use an estimate of our annual effective tax rate at each interim period based upon the facts and circumstances available at that time, while the actual annual effective tax rate is calculated at year-end. Changes in the geographical mix or estimated amount of annual pre-tax income could impact our overall effective tax rate.

Research and Development and Software Development Costs – Software development costs are accounted for in accordance with FASB ASC 985-20, "*Software – Costs of Software to Be Sold, Leased, or Marketed"* and FASB ASC 350-40, "*Intangibles – Goodwill and Other – Internal-Use Software*". Capitalization of software development costs for products to be sold to third parties begins upon the establishment of technological feasibility and ceases when the product is available for general release. We capitalize development costs incurred during the period between the establishment of technological feasibility and the release of the final product to customers if such costs are material. In addition, we capitalize software development costs for internal use software that we do not intend to market to third parties but use to deliver services. The establishment of technological feasibility and the ongoing assessment of recoverability of capitalized software development costs require considerable judgment by management concerning certain external factors including, but not limited to, the date technological feasibility is reached, anticipated future gross revenue, estimated economic life and changes in software and hardware technologies. During the thirteen weeks ended July 1, 2017 and July 2, 2016, internal use software development costs of $75,000 and $153,000, respectively, were expensed as incurred. During the twenty-six weeks ended July 1, 2017 and July 2, 2016, internal use software development costs of $177,000 and $275,000, respectively, were expensed as incurred. During the thirteen weeks ended July 1, 2017 and July 2, 2016, $83,000 and $210,000 of internal use software development costs were capitalized, respectively. During the twenty-six weeks ended July 1, 2017 and July 2, 2016, $183,000 and $357,000, respectively, of internal use software development costs were capitalized.

Inventory – In accordance with the provisions of FASB ASC 330, "*Inventory*", the Company's inventory is stated at the lower of cost, using the first-in, first-out (FIFO) method, or fair value. As of July 1, 2017, the Company had $0.3 million in inventory, all of which was finished goods. All of the inventory was purchased in July 2014 from Elutions, which owns more than five percent of the outstanding shares of common stock of the Company. As provided for in the general framework agreement between the Company and Elutions (see Note 3, Strategic Alliance and Investment by Elutions, Inc. in the Notes to the Condensed Consolidated Financial Statements (Unaudited) included in Item 1, Condensed Consolidated Financial Statements (Unaudited), of this report), if the Company has not sold 75% of the inventory acquired from Elutions within one year after acquisition, Elutions is required upon request to source its requirements for future projects in the U.S. or U.K. from such inventory subject to a 10% discount against the Company's purchase price until the Company has exhausted such inventory. In fiscal 2015, the Company requested that Elutions source its requirements for future projects from the inventory that was acquired by the Company from Elutions in July 2014. Management expects to continue to work with Elutions to utilize the inventory and changes in management's expectations in future periods as the matter is resolved could impact the net realizable value of the inventory.

Share-based Compensation Expense – We grant stock options and non-vested stock to our employees under stock incentive plans and also provide employees the right to purchase our stock at a discount pursuant to an employee stock purchase plan. The benefits provided under these plans are share-based payment awards subject to the provisions of FASB ASC 718, "*Compensation-Stock Compensation*." Under FASB ASC 718, we are required to make significant estimates related to determining the value of our share-based compensation. If factors change and we develop different assumptions in the application of FASB ASC 718 in future periods, the compensation expense that we record under FASB ASC 718 may differ significantly from what we have recorded in the current period. There is a high degree of subjectivity involved when using option pricing models to estimate share-based compensation under FASB ASC 718. Changes in the subjective input assumptions can materially affect our estimates of fair values of our share-based compensation. Certain share-based payment awards, such as employee stock options, may expire worthless or otherwise result in zero intrinsic value as compared to the fair values originally estimated on the grant date and reported in our financial statements. Alternatively, values may be realized from these instruments that are significantly in excess of the fair values originally estimated on the grant date and reported in our financial statements. Although the fair value of employee share-based awards is determined in accordance with FASB ASC 718 and SEC's Staff Accounting Bulletin ("SAB") SAB No. 110 using an option pricing model, such value may not be indicative of the fair value observed in a willing buyer/willing seller market transaction.

For stock options with only a service-based vesting requirement, we calculate grant date fair value using the Black-Scholes valuation model. Our expected stock-price volatility assumption is based on historical volatilities of the underlying stock which are obtained from public data sources. The expected term of options granted is based on the simplified method in accordance with the SAB No. 110 as our historical share option exercise experience does not provide a reasonable basis for estimation. Expense for the awards ultimately expected to vest is recognized on a graded vesting schedule over the vesting period.

For stock options containing a market condition, the market conditions are required to be considered when calculating the grant date fair value. FASB ASC 718 requires us to select a valuation technique that best fits the circumstances of an award. In order to reflect the substantive characteristics of the market condition option award, a Monte Carlo simulation valuation model is used to calculate the grant date fair value of such stock options. Monte Carlo approaches are a class of computational algorithms that rely on repeated random sampling to compute their results. This approach allows the calculation of the value of such stock options based on a large number of possible stock price path scenarios. Expense for the market condition stock options is recognized over the derived service period as determined through the Monte Carlo simulation model. See Note 5, Share-Based Compensation in the Notes to the Condensed Consolidated Financial Statements (Unaudited) included in Item 1, Condensed Consolidated Financial Statements (Unaudited), of this report.

For non-vested, service-based stock awards, compensation is recognized based on achievement of service conditions alone. The fair value of the awards is determined based on the market value of the underlying stock at the grant date. Expense for the awards ultimately expected to vest is recognized on a graded vesting schedule over the vesting period.

For non-vested, performance-based stock awards, compensation expense is recognized based on management's expectations with regard to achievement of certain performance and service conditions. The fair value of the awards is determined based on the market value of the underlying stock at the grant date. Expense for the awards ultimately expected to vest is recognized on a straight-line basis over the implied service period of the award. There is a high degree of subjectivity involved when determining the number of awards which are expected to vest over the service period based on projections of the underlying performance measure. Changes in assumptions related to the achievement of the performance measure may materially affect the amount of expense recognized by the Company for performance-based non-vested stock.

RESULTS OF OPERATIONS

THIRTEEN WEEKS ENDED JULY 1, 2017 COMPARED TO THIRTEEN WEEKS ENDED JULY 2, 2016

REVENUES

Revenues decreased $5.9 million, or 31.2%, to $13.0 million for the second quarter of fiscal 2017 from $18.9 million for the comparable period in the prior fiscal year. The decrease was primarily due to a lower volume of projects in both the North America and EMEA segments. The decrease is also related to a $1.2 million unfavorable change in foreign currency translation rates applied to revenues in our EMEA segment. Our international revenues were approximately 63.4% of total revenues for the second quarter of fiscal 2017 as compared to 58.0% for the comparable period in fiscal 2016.

North America segment revenues decreased $3.3 million, or 43.3% to $4.3 million for the second quarter of fiscal 2017 from $7.5 million for the second quarter of fiscal 2016. The decrease was primarily due to a lower volume of projects compared to the prior year quarter. During the second quarter of fiscal 2017, the North America segment provided services on 65 customer projects, compared to 59 projects performed in the comparable period in the prior fiscal year. Average revenue per project was $66,000 for the second quarter of fiscal 2017 and $128,000 for the second quarter of fiscal 2016. Revenues recognized in connection with fixed price engagements for the second quarters of fiscal 2017 and fiscal 2016 totaled $3.1 million and $6.1 million, respectively, representing 74% and 81% of the total revenues of the segment, respectively.

EMEA segment revenues decreased $2.6 million, or 23.5%, to $8.6 million for the second quarter of fiscal 2017 from $11.2 million for the comparable period in the prior fiscal year. The decrease was related to a $1.2 million impact of unfavorable foreign currency translation of the segment's functional currency to our reporting currency, the U.S. Dollar, as well as a lower volume of projects during fiscal 2017. During the second quarters of fiscal 2017 and fiscal 2016, this segment provided services on 187 and 155 customer projects, respectively, and average revenue per project was approximately $45,000 and $71,000, respectively.

Strategic Alliances segment revenues were $0.1 million and $0.2 million for the second quarters of fiscal 2017 and fiscal 2016, respectively.

COST OF SERVICES

Cost of services decreased $3.6 million, or 28.3%, to $9.0 million for the second quarter of fiscal 2017 from $12.6 million for the second quarter of fiscal 2016. Our gross margin was 30.4% for the second quarter of fiscal 2017 compared to 33.3% for the comparable period in the prior fiscal year.

Cost of services in the North America segment was $2.8 million for the second quarter of fiscal 2017 compared to $4.5 million for the second quarter of fiscal 2016. This decrease was primarily related to lower revenues in the second quarter of fiscal 2017 as compared to the second quarter of fiscal 2016. Our North America segment gross margin was 34.8% for the second quarter of fiscal 2017 compared to 40.4% for the second quarter of fiscal 2016. The decline in gross margin rate during the second quarter of fiscal 2017 was primarily driven by project mix.

Cost of services in the EMEA segment was $6.0 million and $7.7 million during the second quarters of fiscal 2017 and fiscal 2016, respectively. The decrease in cost of services was a result of lower revenue as well as the impact of a $0.8 million change in foreign currency exchange rates. Gross margin in our EMEA segment was 30.6% for the second quarter of fiscal 2017, compared to 31.5% for the comparable period in the prior fiscal year. The decrease in gross margin rate within the EMEA segment was primarily due to project mix.

For our Strategic Alliances segment, cost of services was $0.2 million for both of the second quarters of fiscal 2017 and fiscal 2016, respectively.

OPERATING EXPENSES

Selling, general and administrative expenses were $5.4 million for the second quarter of fiscal 2017 compared to $8.2 million for the second quarter of fiscal 2016, a decrease of $2.9 million, or 15%. The decrease in selling, general and administrative expenses for the second quarter of fiscal 2017 included a reduction of approximately $0.3 million related to the change in foreign currency exchange rates between periods. During the second quarter of fiscal 2017 as compared to the second quarter of fiscal 2016, salaries and related expense decreased $1.2 million, severance expense decreased $0.7 million, professional fees and external consultants expense decreased $0.1 million, information technology costs decreased $0.2 million, travel related expense decreased $0.1 million and foreign currency gains and losses decreased $0.4 million. As a percentage of revenues, our selling, general and administrative expenses were 41.3% for the second quarter of fiscal 2017 compared to 43.6% in the comparable period of the prior fiscal year.

GOODWILL IMPAIRMENT

The Company recorded a non-cash goodwill impairment charge of $10.8 million during the second quarter of fiscal 2016. The facts and circumstances that led to the impairment of goodwill were primarily a result of the decreased market value of the Company based upon the market price of the Company's common stock.

OTHER INCOME AND EXPENSE

Other expense for the second quarters of fiscal 2017 and fiscal 2016 was $48,000 and $143,000, respectively. Other expense for both the 2017 and 2016 fiscal periods included interest expense on the promissory note. The second quarters of fiscal 2017 and 2016 included income of $69,000 and expense of $122,000, respectively, related to the change in fair value of the derivative liability embedded in the promissory note. See Note 3, Strategic Alliance and Investment by Elutions, Inc., in the Notes to the Condensed Consolidated Financial Statements (Unaudited) included in Item 1, Condensed Consolidated Financial Statements (Unaudited), of this report.

INCOME TAXES

During the second quarter of fiscal 2017, we recorded an income tax benefit of $43,000 and during the second quarter of fiscal 2016, we recorded an income tax provision of $10,000. The income tax benefit for fiscal 2017 was primarily related to refinements of the projected 2016 U.K. tax liabilities. The income tax provision for fiscal 2016 was primarily related to the generation of pre-tax book income within our U.K. operations as well as deferred taxes recognized for fiscal 2016 related to goodwill amortized for income tax purposes but not for financial reporting purposes. For the second quarters of fiscal 2017 and fiscal 2016, we recorded no income tax benefit related to our domestic pre-tax losses, in accordance with the provisions of FASB ASC 740, "*Income Taxes*", which requires an estimation of our ability to use recorded deferred income tax assets. We currently have recorded a valuation allowance against all domestic deferred income tax assets generated due to uncertainty about their ultimate realization as a result of our history of domestic operating losses. If we continue to report net operating losses for financial reporting in our domestic operations, no additional tax benefit would be recognized for those losses, since we will not have accumulated enough positive evidence to support our ability to utilize the net operating loss carry-forwards in the future.

TWENTY-SIX WEEKS ENDED JULY 1, 2017 COMPARED TO TWENTY-SIX WEEKS ENDED JULY 2, 2016

REVENUES

Revenues decreased $12.0 million, or 30.5%, to $27.3 million for the first half of fiscal 2017 from $39.2 million for the comparable period in the prior fiscal year. The decrease was primarily due to a large customer engagement in North America in the comparable prior year period along with a lower volume of projects in the first half of fiscal 2017. The decrease is also related to a $2.5 million unfavorable change in foreign currency translation rates applied to revenues in our EMEA segment. Our international revenues were approximately 63.1% of total revenues for the first half of fiscal 2017 as compared to 57.5% for the comparable period in fiscal 2016.

North America segment revenues decreased $6.7 million, or 41.7%, to $9.3 million for the first half of fiscal 2017 from $16.0 million for the first half of fiscal 2016. The decrease was primarily due to a large customer engagement in North America in the prior year period along with a lower volume of projects in the first half of fiscal 2017. During the first half of fiscal 2017, the North America segment provided services on 83 customer projects compared to 73 projects performed in the comparable period in the prior fiscal year. Average revenue per project was $113,000 for the first half of fiscal 2017 and $220,000 for the first half of fiscal 2016. Revenues recognized in connection with fixed price engagements for the first half of fiscal 2017 and fiscal 2016 totaled $7.1 million and $13.0 million, respectively, representing 76% and 81% of the total revenues of the segment, respectively.

EMEA segment revenues decreased $5.3 million, or 23.1%, to $17.6 million for the first half of fiscal 2017 from $22.9 million for the comparable period in the prior fiscal year. The decrease was primarily due to a $2.5 million impact of unfavorable foreign currency translation of the segment's functional currency to our reporting currency, the U.S. Dollar, as well as a lower volume of projects during the first half of fiscal 2017. During the first half of fiscal 2017 and fiscal 2016, this segment provided services on 259 and 331 customer projects, respectively, and average revenue per project was approximately $67,000 and $68,000, respectively.

Strategic Alliances segment revenues were $0.3 million and $0.3 million for the first half of fiscal 2017 and fiscal 2016, respectively.

COST OF SERVICES

Cost of services decreased $7.1 million, or 27.2%, to $18.8 million for the first half of fiscal 2017 from $25.9 million for the first half of fiscal 2016. Our gross margin was 30.9% for the first half of fiscal 2017 compared to 33.9% for the comparable period in the prior fiscal year.

Cost of services in the North America segment was $6.1 million for the first half of fiscal 2017 compared to $9.9 million for the first half of fiscal 2016. This decrease was primarily related to lower revenues in the first half of fiscal 2017 as compared to the first half of fiscal 2016. Our North America segment gross margin was 34.4% for the first half of fiscal 2017 compared to 38.4% for the first half of fiscal 2016. The decline in gross margin rate during the first half of fiscal 2017 was primarily driven by project mix.

Cost of services in the EMEA segment was $12.2 million and $15.5 million during the first half of fiscal 2017 and fiscal 2016, respectively. The decrease in cost of services was a result of lower revenue as well as the impact of a $1.7 million change in foreign currency exchange rates. Gross margin in our EMEA segment was 31.0% for the first half of fiscal 2017, compared to 32.4% for the comparable period in the prior fiscal year. The decrease in gross margin rate within the EMEA segment was primarily due to project mix.

For our Strategic Alliances segment, cost of services was $0.4 million and $0.3 million for the first half of fiscal 2017 and fiscal 2016, respectively.

OPERATING EXPENSES

Selling, general and administrative expenses were $11.4 million for the first half of fiscal 2017 compared to $16.0 million for the first half of fiscal 2016, a decrease of $4.6 million, or 29%. The decrease in selling, general and administrative expenses for the first half of fiscal 2017 included a reduction of approximately $0.7 million related to the change in foreign currency exchange rates. During the first half of fiscal 2017 as compared to the first half of fiscal 2016, salaries and related expense decreased $2.8 million, severance expense decreased $0.7 million, professional fees and external consultants expense decreased $0.4 million, information technology costs decreased $0.5 million and travel related expense decreased $0.2 million. These decreases were partially offset by $0.4 million of non-cash expense related to the increase in the fair value of the earn-out liability in first half of fiscal 2017 as compared to a $0.3 million reduction in the fair value of the earn-out liability in the prior year quarter. As a percentage of revenues, our selling, general and administrative expenses were 41.7% for the first half of fiscal 2017 compared to 40.8% in the comparable period of the prior fiscal year.

GOODWILL IMPAIRMENT

The Company recorded a non-cash goodwill impairment charge of $10.8 million during the second quarter of fiscal 2016. The facts and circumstances that led to the impairment of goodwill were primarily a result of the decreased market value of the Company based upon the market price of the Company's common stock.

OTHER INCOME AND EXPENSE

Other expense for the first half of fiscal 2017 and fiscal 2016 was $41,000 and $137,000, respectively. Other expense for both the 2017 and 2016 fiscal periods included interest expense on the promissory note. The first half of fiscal 2017 and 2016 included income of $142,000 and expense of $49,000, respectively, related to the change in fair value of the derivative liability embedded in the promissory note. See Note 3, Strategic Alliance and Investment by Elutions, Inc., in the Notes to the Condensed Consolidated Financial Statements (Unaudited) included in Item 1, Condensed Consolidated Financial Statements (Unaudited), of this report.

INCOME TAXES

During the first half of fiscal 2017, we recorded an income tax benefit of $72,000 and during the first half of fiscal 2016, we recorded an income tax provision of $132,000, respectively. The income tax benefit for fiscal 2017 was primarily related to refinements of the projected 2016 U.K. tax liabilities. The income tax provision for fiscal 2016 was primarily related to the generation of pre-tax book income within our U.K. operations as well as deferred taxes recognized for fiscal 2016 related to goodwill amortized for income tax purposes but not for financial reporting purposes. For the first half of fiscal 2017 and fiscal 2016, we recorded no income tax benefit related to our domestic pre-tax losses, in accordance with the provisions of FASB ASC 740, "*Income Taxes*", which requires an estimation of our ability to use recorded deferred income tax assets. We currently have recorded a valuation allowance against all domestic deferred income tax assets generated due to uncertainty about their ultimate realization as a result of our history of domestic operating losses. If we continue to report net operating losses for financial reporting in our domestic operations, no additional tax benefit would be recognized for those losses, since we will not have accumulated enough positive evidence to support our ability to utilize the net operating loss carry-forwards in the future.

STATEMENT REGARDING NON-GAAP FINANCIAL MEASUREMENT

In addition to loss from operations on a GAAP basis and net loss and net loss per share on a GAAP basis, our management uses the non-GAAP financial measures, "Non-GAAP adjusted loss from operations", "non-GAAP adjusted net loss" and “Constant Currency Revenues” in its evaluation of our performance, particularly when comparing performance to the prior year's period. These non-GAAP measures contain certain non-GAAP adjustments which are described in the following schedule entitled "Reconciliation of GAAP Net Loss to Non-GAAP Adjusted Net Loss and GAAP Loss from Operations to Non-GAAP Adjusted Loss from Operations" and “Reconciliation of Non-GAAP Constant Currency Revenues to GAAP Revenues”. In making these non-GAAP adjustments, we take into account certain non-cash expenses and benefits, including tax effects as applicable, and the impact of certain items that are generally not expected to be on-going in nature or that are unrelated to our core operations. Management believes the exclusion of these items provides a useful basis for evaluating underlying business performance, but should not be considered in isolation and is not in accordance with, or a substitute for, evaluating our performance utilizing GAAP financial information. In calculating revenues for the second quarter and year-to-date period of fiscal 2017 on a constant currency basis, the Company applied average foreign exchange rates from the comparable periods of the prior fiscal year to the Company's foreign-denominated revenues in the second quarter and year-to-date period of the current fiscal year. We believe that providing such adjusted results allows investors and other users of our financial statements to better understand our comparative operating performance for the periods presented. Our non-GAAP measures may differ from similar measures by other companies, even if similar terms are used to identify such measures. Although management believes the non-GAAP financial measures are useful in evaluating the performance of our business, we acknowledge that items excluded from such measures have a material impact on our loss from operations and net loss and net loss per share calculated in accordance with GAAP. Therefore, management uses non-GAAP measures in conjunction with GAAP results. Investors and other users of our financial information should also consider the above factors when evaluating our results.

CARTESIAN, INC.
RECONCILIATION OF GAAP LOSS FROM OPERATIONS TO NON-GAAP ADJUSTED LOSS FROM OPERATIONS AND GAAP NET LOSS TO NON-GAAP ADJUSTED NET LOSS
(unaudited)
(in thousands, except per share data)

	Thirteen Weeks Ended July 1, 2017	Thirteen Weeks Ended July 2, 2016	Twenty-Six Weeks Ended July 1, 2017	Twenty-Six Weeks Ended July 2, 2016
Reconciliation of GAAP loss from operations to non-GAAP adjusted loss from operations:				
GAAP loss from operations	$ (1,419)	$ (12,775)	$ (2,945)	$ (13,519)
Depreciation	313	263	596	508
Amortization of intangible assets	68	76	134	165
Non-cash share based compensation expense	(128)	56	(9)	189
Goodwill impairment	—	10,830	—	10,830
Fair value adjustment to contingent consideration	80	(53)	365	(301)
Inventory adjustment	91	104	91	104
Accrued executive severance and related costs	26	750	54	750
Lease expense for discontinuation of office space	—	—	58	—
Foreign currency exchange (gain) loss on note payable	(116)	242	(168)	333
Adjustments to GAAP loss from operations	334	12,268	1,121	12,578
Non-GAAP adjusted loss from operations	$ (1,085)	$ (507)	$ (1,824)	$ (941)
Reconciliation of GAAP net loss to non-GAAP adjusted net loss:				
GAAP net loss	$ (1,424)	$ (12,908)	$ (2,914)	$ (13,788)
Depreciation	313	263	596	508
Amortization of intangible assets	68	76	134	165
Non-cash share based compensation expense	(128)	56	(9)	189
Goodwill impairment	—	10,830	—	10,830
Fair value adjustment to contingent consideration	80	(53)	365	(301)
Inventory adjustment	91	104	91	104
Accrued executive severance and related costs	26	750	54	750
Lease expense for discontinuation of office space	—	—	58	—
Change in fair value of derivative liabilities	(69)	122	(142)	49
Foreign currency exchange (gain) loss on note payable	(116)	242	(168)	333
Incentive warrants expense	35	27	41	34
Tax effect of applicable non-GAAP adjustments (1)	4	(35)	48	(38)
Adjustments to GAAP net loss	304	12,382	1,068	12,623
Non-GAAP adjusted net loss	$ (1,120)	$ (526)	$ (1,846)	$ (1,165)

	Thirteen Weeks Ended July 1, 2017	Thirteen Weeks Ended July 2, 2016	Twenty-Six Weeks Ended July 1, 2017	Twenty-Six Weeks Ended July 2, 2016
Reconciliation of GAAP net loss per diluted common share to non-GAAP adjusted net loss per diluted common share:				
GAAP net loss per diluted common share	$ (0.16)	$ (1.49)	$ (0.33)	$ (1.60)
Depreciation	0.04	0.03	0.07	0.06
Amortization of intangible assets	0.01	0.01	0.01	0.02
Non-cash share based compensation expense	(0.02)	0.01	—	0.02
Goodwill impairment	—	1.25	—	1.25
Fair value adjustment to contingent consideration	0.01	(0.01)	0.04	(0.03)
Inventory adjustment	0.01	0.01	0.01	0.01
Accrued executive severance and related costs	—	0.09	0.01	0.09
Lease expense for discontinuation of office space	—	—	0.01	—
Change in fair value of derivative liabilities	(0.01)	0.01	(0.02)	0.01
Foreign currency exchange (gain) loss on note payable	(0.01)	0.03	(0.02)	0.04
Incentive warrants expense	—	—	—	—
Tax effect of applicable non-GAAP adjustments (1)	—	—	0.01	—
Adjustments to GAAP net loss per diluted common share	0.03	1.43	0.12	1.47
Non-GAAP adjusted net loss per diluted common share	$ (0.13)	$ (0.06)	$ (0.21)	$ (0.13)
Weighted average shares used in calculation of Non-GAAP adjusted net loss per diluted common share	8,774	8,636	8,708	8,640

(1) The Company calculated the tax effect of non-GAAP adjustments by applying an applicable estimated jurisdictional tax rate to each specific non-GAAP item after consideration of the Company's valuation allowance.

CARTESIAN, INC.
RECONCILIATION OF NON-GAAP CONSTANT CURRENCY REVENUES
TO GAAP REVENUES
(unaudited)
(in thousands, except growth rates)

	Thirteen Weeks Ended			Twenty-six Weeks Ended		
	July 1, 2017	**July 2, 2016**	**Year-Over-Year**	**July 1, 2017**	**July 2, 2016**	**Year-Over-Year**
Non-GAAP Constant Currency Revenues Reconciliation (1)						
GAAP revenues, as reported	$ 12,998	$ 18,899	(31.2)%	$ 27,264	$ 39,216	(30.5)%
Foreign currency exchange impact on fiscal 2017 revenues using fiscal 2016 average rates	1,154			2,537		
Non-GAAP revenues, at constant currency	$ 14,152	$ 18,899	(25.1)%	$ 29,801	$ 39,216	(24.0)%

(1) Non-GAAP revenues on a constant currency basis are calculated by applying the average foreign exchange rates for the thirteen weeks and twenty-six weeks ended July 2, 2016 to foreign-denominated revenues in the comparable current year period. The difference between non-GAAP revenues and revenues calculated in accordance with GAAP is shown as "foreign currency exchange impact" in the table above. Non-GAAP constant currency revenue changes (expressed as a percentage) are calculated by determining the change in non-GAAP constant currency revenues in the interim and year-to-date periods of fiscal 2017 compared to GAAP revenues for the prior year periods.

LIQUIDITY AND CAPITAL RESOURCES

During the twenty-six weeks ended July 1, 2017, net cash used in operating activities was $2.2 million. Included in net cash used in operating activities was a net loss of $2.9 million partially offset by $1.0 million of non-cash expenses. In addition, changes in working capital accounted for $0.3 million in cash used by operations. The working capital changes primarily related to a $1.4 million decrease in accounts receivable related to the timing of collections from customers and a $0.7 million increase in trade accounts payable related to the timing of payments to vendors, offset by a $2.0 million decrease in accrued liabilities.

During the twenty-six weeks ended July 2, 2016, net cash used in operating activities was $1.4 million. Included in net cash used in operating activities was a net loss of $13.8 million partially offset by $11.6 million of non-cash expenses. Included in the net loss and non-cash expenses was a goodwill impairment charge of $10.8 million. In addition, changes in working capital accounted for $0.7 million in cash provided by operations. The working capital changes related primarily to increases in accrued severance of $0.6 million and accrued liabilities of $0.5 million which were partially offset by a $0.5 million decrease in trade accounts payable.

Net cash used in investing activities was $0.8 million and $0.9 million for the twenty-six weeks ended July 1, 2017 and July 2, 2016, respectively. The 2016 fiscal period includes $0.3 million of cash used related to the Farncombe acquisition. Both fiscal periods included cash used for the purchase of office equipment, software and computer equipment.

Net cash provided by financing activities for the twenty-six weeks ended July 1, 2017 and July 2, 2016 was $2.0 million and $0.5 million, respectively. Cash provided by financing activities for the twenty-six weeks ended July 1, 2017 and July 2, 2016 primarily related to cash received under the accounts receivable factoring agreements with third-party financial institutions. For further discussion of the factoring agreements, see below and Note 1, Basis of Reporting, in the Notes to the Condensed Consolidated Financial Statements (Unaudited) included in Item 1, Condensed Consolidated Financial Statements (Unaudited), of this report. During twenty-six weeks ended July 2, 2016 we used $0.1 million to repurchase shares under a put option agreement with a former executive.

At July 1, 2017, we had $3.0 million in cash and cash equivalents and $1.5 million in net working capital. At July 1, 2017, $1.6 million and $0.5 million of our cash and cash equivalents were denominated in British pounds sterling and Euros, respectively, which we would be able to repatriate, if needed, without any negative U.S. income tax consequences. Our cash resources and cash flows from operations have been sufficient to pay our obligations and debts as they become due. However, our current capital resources may not be sufficient to repay the Elutions Note described below in an aggregate original principal amount of $3.3 million, if it were to be called for redemption, and to fund our operations going forward. The Elutions Note matures on

March 18, 2019, but may be called for redemption by the holder at any time and is payable 30 days after it is called for redemption. In addition, as described below, we were obligated to pay the earn-out consideration that is payable in connection with the acquisition of the Farncombe Entities in 2015. We are not in default under the Elutions Note and do not have any reason to currently expect that the Elutions Note will be called for redemption, given that (i) we are paying our debts as they become due (including making timely payments of interest on the Elutions Note), (ii) a call by the holder of the Elutions Note for redemption would cause Elutions to no longer have the right to purchase shares of stock pursuant to the Tracking Warrant and (iii) Elutions is a significant stockholder of the Company and a call by the holder of the Elutions Note for redemption may adversely affect the value of Elution's other equity holdings in the Company. Under the Tracking Warrant, Elutions has the right to purchase up to 996,544 shares of common stock of the Company for $3.28 per share. The Tracking Warrant expires March 18, 2020. Although we do not have any reason to currently expect that the Elutions Note will be called for redemption, any determination by the holder of the Elutions Note is outside of our control.

As described below, we have entered into receivable financing and factoring arrangements with respect to certain accounts receivable, provided that our ability to finance receivables is subject to limitations, including in certain arrangements the willingness of the purchaser to purchase individual accounts receivable that are offered by us. If the Elutions Note is called by the holder or if we realize significant negative cash flows from operations, we will be required to seek additional debt or equity financing. As further described below, Elutions has certain rights of first offer in connection with debt financings by us, subject to certain exceptions. In addition, if we obtain debt financing from other lenders, subject to certain exceptions, Elutions may require us to redeem the Elutions Note and to repurchase the shares of our common stock originally acquired by Elutions at a price based upon market prices over 15 trading days prior to the repurchase. In addition, Elutions has certain preemptive rights in connection with equity issuances by us, subject to certain exceptions, and we and our subsidiaries may not, without the prior written consent of Elutions, issue options, warrants or similar rights or convertible securities, other than with respect to certain excluded issuances.

In the fourth quarter of 2016, the Company adopted Accounting Standards Update 2014-15, Presentation of Financial Statements - Going Concern, that requires management to assess conditions or events that raise substantial doubt about an entity's ability to continue as a going concern within one year after the financial statements are issued. Management has concluded under ASU 2014-15 that there is substantial doubt about the Company's ability to continue as a going concern if the Company is unable to arrange financing sufficient to pay off the Elutions Note upon a call for redemption. We are exploring alternatives to address our liquidity needs in the event the Elutions Note is called for redemption. We currently expect that such financing can be obtained if necessary. However, there can be no assurance that financing will be available in amounts or on terms acceptable to us, if at all. Our ability to secure new financing may be impacted by economic and financial market conditions. If financing is obtained through the sale of additional equity securities or debt securities with equity features, it could result in dilution to our stockholders. If adequate funds were not available on acceptable terms, our business, results of operations, cash flows, and financial condition could be materially adversely affected.

We have entered into agreements with third-party financial institutions under which we can selectively elect to transfer to the financial institutions accounts receivables with certain of our largest customers on a non-recourse basis. These agreements give us optionality to convert outstanding accounts receivable to cash at what we believe is a reasonable discount rate. During the twenty-six weeks ended July 1, 2017 and July 2, 2016, $5.9 million and $10.7 million, respectively, in accounts receivable was transferred pursuant to these agreements.

In addition, on April 22, 2016, we entered into an agreement with RTS Financial Service, Inc. ("RTS") under which we may offer for sale, and RTS may purchase, certain accounts receivable of the Company on an account by account basis with recourse. Our obligations under the agreement with RTS are secured by all present and future accounts receivable and related assets, equipment and inventory of the Company, other than to the extent such assets are pledged pursuant to certain existing agreements of the Company and other than assets of the Company's subsidiaries. The Company subsequently amended the Factoring Agreement to add certain North American subsidiaries of the Company to the Factoring Agreement. This agreement provides us with additional ability to convert outstanding accounts receivable to cash, subject to the willingness of RTS to purchase individual accounts receivable. During the twenty-six weeks ended July 1, 2017 and July 2, 2016, the Company factored $1.9 million and $0.6 million, respectively, of accounts receivable under the Factoring Agreement which is included in Secured borrowing on the Condensed Consolidated Balance Sheets. See Note 1, Basis of Reporting, in the Notes to the Condensed Consolidated Financial Statements (Unaudited) included in Item 1, Condensed Consolidated Financial Statements (Unaudited), of this report.

On July 29, 2016, Cartesian Limited, a U.K. subsidiary of Cartesian, Inc., entered into an Invoice Discounting Agreement, a Debenture (security agreement) and certain related agreements with RBS Invoice Finance Limited ("RBS"). Pursuant to the terms of the agreements, Cartesian Limited may assign to RBS Invoice Finance Limited certain eligible accounts receivable of Cartesian Limited. During the twenty-six weeks ended July 1, 2017, $11.9 million of accounts receivable were factored under the agreement with RBS. See Note 1, Basis of Reporting, in the Notes to the Condensed Consolidated Financial Statements (Unaudited) included in Item 1, Condensed Consolidated Financial Statements (Unaudited), of this report.

During 2014 we entered into an Investment Agreement with Elutions, a provider of operational business intelligence solutions. Under the Investment Agreement, among other things, we agreed to issue and sell shares of common stock to Elutions and the parties agreed that a subsidiary of Elutions would loan funds to a subsidiary of Cartesian. On March 18, 2014, Cartesian and Elutions completed the closing of the transactions contemplated under the Investment Agreement and our subsidiary, Cartesian Limited, issued a non-convertible promissory note payable to Elutions Capital Ventures S.à r.l, a subsidiary of Elutions, in an aggregate original principal amount of $3.3 million. The promissory note bears interest at the rate of 7.825% per year, payable monthly, and matures on March 18, 2019. The promissory note may be called by the holder at any time. Under the Investment Agreement, Elutions has a right of first offer to loan funds to us if we intend to incur indebtedness and preemptive rights with respect to certain issuances of our equity securities, subject in each case to certain exceptions. In addition, in the event that we incur or assume certain indebtedness with a lender other than Elutions that is senior to or pari passu with the promissory note issued to a subsidiary of Elutions in March 2014, Elutions may require us to purchase the shares of our common stock originally acquired by Elutions at a price based upon then-current market prices. In addition, under the Investment Agreement, we may not, without the prior written consent of Elutions, issue options, warrants or similar rights or convertible securities, other than with respect to certain excluded issuances. See Note 3, Strategic Alliance and Investment by Elutions, Inc., in the Notes to the Condensed Consolidated Financial Statements (Unaudited) included in Item 1, Condensed Consolidated Financial Statements (Unaudited), of this report.

FINANCIAL COMMITMENTS

As described in our discussion of liquidity and capital resources above, and in the Notes to the Condensed Consolidated Financial Statements (Unaudited) of this report, in 2014 our subsidiary, Cartesian Limited, issued a non-convertible promissory note in the amount of $3.3 million as part of the Investment Agreement with Elutions. The promissory note may be called by the holder at any time and may be prepaid by Cartesian Limited at any time after September 18, 2016. Upon occurrence of an event of default, the promissory note would bear interest at 9.825% per year and could be declared immediately due and payable.

In connection with the acquisition of the Farncombe Entities as described in the Notes to the Condensed Consolidated Financial Statements (Unaudited) of this report, the total purchase price included earn-out consideration which was payable in cash and/or shares of Company common stock as elected by each Seller in the Share Purchase Agreement. In April 2017, the Company agreed to pay the full amount of the earn-out consideration, which equaled £719,483 pounds sterling (approximately US$1.0 million based on an exchange rate of £1.000 = US$1.300 as of July 1, 2017) and 461,055 shares of Company common stock (approximately £1,024,765 pounds sterling or US$1.3 million based on an exchange rate of £1.000= US$1.300 as of July 1, 2017). After the end of second quarter 2017, the Company paid the full amount of the earn-out consideration.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures and Changes in Internal Control Over Financial Reporting

The Company maintains disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 (“the Exchange Act”)) that are designed to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in SEC rules and forms; and (ii) accumulated and communicated to the Company’s management, including its principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure. We have established a Disclosure Committee, consisting of certain members of management, to assist in this evaluation. The Disclosure Committee meets on a regular quarterly basis, and as needed.

A review and evaluation was performed by our management, including our Chief Executive Officer and Chief Financial Officer (the “CEO” and “CFO”), of the effectiveness of our disclosure controls and procedures as of the end of the period covered by this quarterly report. Based upon this evaluation, the Company’s CEO and CFO have concluded that the Company’s disclosure controls and procedures were effective as of July 1, 2017.

There were no changes in our internal control over financial reporting during the fiscal quarter ended July 1, 2017, that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

We have not been subject to any material new litigation since the filing on March 31, 2017 of our 2016 Form 10-K.

ITEM 1A. RISK FACTORS

For a discussion of risk factors relating to the Company and its common stock, please see Item 1A, "Risk Factors" in the 2016 Form 10-K.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

None

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None

ITEM 4. MINE SAFETY DISCLOSURES

None

ITEM 5. OTHER INFORMATION

None

ITEM 6. EXHIBITS

Pursuant to the rules and regulations of the Securities and Exchange Commission, the Company has filed, furnished or incorporated by reference the documents referenced in the accompanying Index to Exhibits as exhibits to this Quarterly Report on Form 10-Q. The documents include agreements to which the Company is a party or has a beneficial interest. The agreements have been filed to provide investors with information regarding their respective terms. The agreements are not intended to provide any other factual information about the Company or its business or operations. In particular, the assertions embodied in any representations, warranties and covenants contained in the agreements may be subject to qualifications with respect to knowledge and materiality different from those applicable to investors and may be qualified by information in confidential disclosure schedules not included with the exhibits. These disclosure schedules may contain information that modifies, qualifies and creates exceptions to the representations, warranties and covenants set forth in the agreements. Moreover, certain representations, warranties and covenants in the agreements may have been used for the purpose of allocating risk between the parties, rather than establishing matters as facts. In addition, information concerning the subject matter of the representations, warranties and covenants may have changed after the date of the respective agreement, which subsequent information may or may not be fully reflected in the Company's public disclosures. Accordingly, investors should not rely on the representations, warranties and covenants in the agreements as characterizations of the actual state of facts about the Company or its business or operations on the date hereof. The Company will furnish to any stockholder, upon written request, any exhibit listed in the accompanying Index to Exhibits upon payment by such stockholder of the Company's reasonable expenses in furnishing any such exhibit.

Exhibit No.	Description of Exhibit
Exhibit 2.1	Share Purchase Agreement, dated July 22, 2015, among Cartesian, Inc. and the Sellers referenced therein, for the acquisition of the Farncombe Entities, filed as exhibit 2.1 to the Company’s Current Report on Form 8-K filed with the Securities and Exchange Commission on July 23, 2015 is incorporated herein by reference as Exhibit 2.1.*
Exhibit 2.2	Letter Agreement, effective April 4, 2017, among Cartesian, Inc. and the Sellers referenced therein, filed as exhibit 2.1 to the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on April 19, 2017 is incorporated herein by reference as Exhibit 2.2.
Exhibit 31.1	Certification of the Chief Executive Officer of Cartesian, Inc. pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. Filed Herewith.
Exhibit 31.2	Certification of the Chief Financial Officer of Cartesian, Inc. pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. Filed Herewith.
Exhibit 32	Certifications furnished pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
Exhibit 101	101.INS XBRL Instance Document 101.SCH XBRL Taxonomy Extension Schema Document 101.CAL XBRL Taxonomy Extension Calculation Linkbase Document 101.DEF XBRL Taxonomy Extension Definition Linkbase Document 101.LAB XBRL Taxonomy Extension Label Linkbase Document 101.PRE XBRL Taxonomy Extension Presentation Linkbase Document

* Portions of this document were redacted and are subject to an order granting confidential treatment under the Securities Exchange Act of 1934, as amended (File No. 1-34006-CF#32732). Redacted portions are indicated with the notation [***].

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

		Cartesian, Inc. (Registrant)
Date: August 15, 2017	By	/s/ Peter H. Woodward
		(Signature) Peter H. Woodward Chief Executive Officer (Principal executive officer)
Date: August 15, 2017	By	/s/ John C. Ferrara
		(Signature) John C. Ferrara Chief Financial Officer (Principal financial officer)

EXHIBIT INDEX

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EXHIBIT 31.1

CERTIFICATIONS PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Peter H. Woodward, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cartesian, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: August 15, 2017

By: /s/ PETER H. WOODWARD

CHIEF EXECUTIVE OFFICER

EXHIBIT 31.2

CERTIFICATIONS PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, John C. Ferrara, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cartesian, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 15, 2017

By: /s/ JOHN C. FERRARA
CHIEF FINANCIAL OFFICER

EXHIBIT 32

CERTIFICATIONS FURNISHED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Peter H. Woodward, Chief Executive Officer of Cartesian, Inc. (the "Company"), certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that:

1. The Quarterly Report on Form 10-Q of the Company for the fiscal quarter ended July 1, 2017 (the “Report”) fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: August 15, 2017

By: /s/ PETER H. WOODWARD

CHIEF EXECUTIVE OFFICER

I, John C. Ferrara, Chief Financial Officer of Cartesian, Inc. (the "Company"), certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that:

1. The Quarterly Report on Form 10-Q of the Company for the fiscal quarter ended July 1, 2017 (the “Report”) fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: August 15, 2017

By: /s/ JOHN C. FERRARA

CHIEF FINANCIAL OFFICER