

PROS Holdings, Inc.  
Form 10-Q  
October 26, 2017  
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UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington D.C. 20549

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FORM 10-Q

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QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended September 30, 2017

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to .

Commission File Number: 001-33554

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

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Delaware 76-0168604  
(State of Incorporation) (I.R.S. Employer Identification No.)

3100 Main Street, Suite 900 77002  
Houston TX  
(Address of Principal Executive Offices) (Zip Code)  
(713) 335-5151  
(Registrant's telephone number, including area code)

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(Former Name, Former Address and Former Fiscal Year, if changed Since Last Report)

Indicate by check mark whether 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 (§232.405 of this chapter) 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 or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer  Accelerated Filer

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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

The number of shares outstanding of the registrant's Common Stock, \$0.001 par value, was 31,906,987 as of October 23, 2017.

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Form 10-Q  
For the Quarterly Period Ended September 30, 2017

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## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements relate to future events or our future financial performance. These forward-looking statements regarding future events and our future results are based on current expectations, estimates, forecasts and projections, and the beliefs and assumptions of our management including, without limitation, our expectations regarding the following: our ability to execute on our revenue strategy shift to cloud-first, the license and subscription revenues generated by our software products and services; the impact of our revenue recognition policies; our belief that our current assets, including cash, cash equivalents, short-term investments, and expected cash flows from operating activities, will be sufficient to fund our operations; our belief that we will successfully integrate our acquisitions; our anticipated additions to property, plant and equipment; our belief that our facilities are suitable and adequate to meet our current operating needs; and our belief that we do not have any material exposure to changes in the fair value of our investment portfolio as a result of changes in foreign currency exchange rates or interest rates. Words such as, but not limited to, “we expect,” “anticipate,” “target,” “project,” “believe,” “goals,” “estimate,” “potential,” “predict,” “may,” “might,” “could,” “would,” “intend,” and variations of these type and similar expressions are intended to identify these forward-looking statements.

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## PART I. Financial Information

## ITEM 1. INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

## PROS Holdings, Inc.

## Condensed Consolidated Balance Sheets

(In thousands, except share and per share amounts)

(Unaudited)

	September 30, 2017	December 31, 2016
Assets:		
Current assets:		
Cash and cash equivalents	\$ 157,359	\$ 118,039
Short-term investments	—	15,996
Accounts and unbilled receivables, net of allowance of \$760	34,641	33,285
Prepaid and other current assets	12,123	6,337
Total current assets	204,123	173,657
Property and equipment, net	14,471	15,238
Intangibles, net	28,972	12,650
Goodwill	38,309	20,096
Other long-term assets	6,754	6,013
Total assets	\$ 292,629	\$ 227,654
Liabilities and Stockholders' Equity:		
Current liabilities:		
Accounts payable and other liabilities	\$ 4,203	\$ 2,744
Accrued liabilities	7,693	7,279
Accrued payroll and other employee benefits	13,312	18,349
Deferred revenue	73,092	68,349
Total current liabilities	98,300	96,721
Long-term deferred revenue	18,672	11,389
Convertible debt, net	210,312	122,299
Other long-term liabilities	756	639
Total liabilities	328,040	231,048
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Preferred stock, \$0.001 par value, 5,000,000 shares authorized; none issued	—	—
Common stock, \$0.001 par value, 75,000,000 shares authorized; 36,319,135 and 35,001,236 shares issued, respectively; 31,901,550 and 30,583,651 shares outstanding, respectively	36	35
Additional paid-in capital	202,905	175,678
Treasury stock, 4,417,585 common shares, at cost	(13,938	) (13,938 )
Accumulated deficit	(221,205	) (160,259 )
Accumulated other comprehensive loss	(3,209	) (4,910 )
Total stockholders' equity	(35,411	) (3,394 )
Total liabilities and stockholders' equity	\$ 292,629	\$ 227,654

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

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PROS Holdings, Inc.  
Condensed Consolidated Statements of Comprehensive Income (Loss)  
(In thousands, except per share data)  
(Unaudited)

	Three Months Ended		Nine Months Ended	
	September 30,		September 30,	
	2017	2016	2017	2016
Revenue:				
Subscription	\$15,809	\$9,852	\$41,457	\$27,196
Maintenance and support	17,124	17,666	52,332	51,103
Total subscription, maintenance and support	32,933	27,518	93,789	78,299
License	603	2,419	3,883	8,178
Services	8,401	8,447	24,800	26,873
Total revenue	41,937	38,384	122,472	113,350
Cost of revenue:				
Subscription	7,868	4,808	19,605	12,342
Maintenance and support	2,859	3,416	8,886	10,266
Total cost of subscription, maintenance and support	10,727	8,224	28,491	22,608
License	73	38	210	199
Services	6,924	7,380	21,718	24,594
Total cost of revenue	17,724	15,642	50,419	47,401
Gross profit	24,213	22,742	72,053	65,949
Operating expenses:				
Selling and marketing	16,980	13,641	50,625	47,725
General and administrative	10,324	9,253	30,514	27,910
Research and development	14,046	12,964	42,429	39,454
Acquisition-related	613	—	613	—
Loss from operations	(17,750 )	(13,116 )	(52,128 )	(49,140 )
Convertible debt interest and amortization	(4,094 )	(2,339 )	(9,078 )	(6,943 )
Other income (expense), net	347	(26 )	315	(139 )
Loss before income tax provision	(21,497 )	(15,481 )	(60,891 )	(56,222 )
Income tax (benefit) provision	(271 )	227	55	490
Net loss	\$(21,226)	\$(15,708)	\$(60,946)	\$(56,712)
Net loss per share:				
Basic and diluted	\$(0.67 )	\$(0.52 )	\$(1.93 )	\$(1.87 )
Weighted average number of shares:				
Basic and diluted	31,867	30,469	31,527	30,341
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustment	\$329	\$176	\$1,705	\$538
Unrealized gain (loss) on available-for-sale securities	6	(8 )	(4 )	18
Other comprehensive income (loss), net of tax	335	168	1,701	556
Comprehensive loss	\$(20,891)	\$(15,540)	\$(59,245)	\$(56,156)

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

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PROS Holdings, Inc.  
Condensed Consolidated Statements of Cash Flows  
(In thousands)  
(Unaudited)

	Nine Months Ended September 30,	
	2017	2016
Operating activities:		
Net loss	\$(60,946)	\$(56,712)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Depreciation and amortization	7,047	7,396
Amortization of debt discount and issuance costs	6,363	4,786
Share-based compensation	17,665	14,445
Deferred income tax, net	(453)	) 64
Provision for doubtful accounts	—	(226)
Changes in operating assets and liabilities:		
Accounts and unbilled receivables	(141)	) 12,899
Prepaid expenses and other assets	(6,301)	) (746)
Accounts payable and other liabilities	1,734	(2,546)
Accrued liabilities	(473)	) 887
Accrued payroll and other employee benefits	(5,722)	) 709
Deferred revenue	11,379	11,885
Net cash used in operating activities	(29,848)	) (7,159)
Investing activities:		
Purchases of property and equipment	(1,235)	) (6,524)
Acquisition of Vayant, net of cash acquired	(34,130)	) —
Capitalized internal-use software development costs	(1,996)	) (569)
Purchase of intangible assets	(75)	) —
Purchases of short-term investments	—	(144,934)
Proceeds from maturities of short-term investments	15,992	96,500
Net cash used in investing activities	(21,444)	) (55,527)
Financing activities:		
Exercise of stock options	6,347	420
Proceeds from employee stock plans	1,535	1,090
Tax withholding related to net share settlement of stock awards	(7,243)	) (5,244)
Payments of notes payable	(155)	) (196)
Debt issuance costs related to Revolver	(150)	) —
Debt issuance cost related to convertible debt	(2,673)	) —
Proceeds from issuance of convertible debt, net	93,500	—
Net cash provided by (used in) financing activities	91,161	(3,930)
Effect of foreign currency rates on cash	(549)	) 54
Net change in cash and cash equivalents	39,320	(66,562)
Cash and cash equivalents:		
Beginning of period	118,039	161,770
End of period	\$157,359	\$95,208

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.



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PROS Holdings, Inc.  
Notes to Condensed Consolidated Financial Statements  
(Unaudited)

### 1. Organization and Nature of Operations

PROS Holdings, Inc., a Delaware corporation, through its operating subsidiaries (collectively, the "Company"), is a cloud software company powering the shift to modern commerce by helping companies create personalized and frictionless buying experiences for their customers. Fueled by dynamic pricing science and machine learning, PROS solutions make it possible for companies to price, configure and sell their products and services in an omnichannel environment with speed, precision and consistency. PROS customers, who are leaders in their markets, benefit from decades of data science expertise infused into its industry solutions. The Company provides its solutions to enterprises across the manufacturing, distribution, and services industries, including automotive and industrial, business-to-business ("B2B") services, cargo, chemicals and energy, consumer goods, insurance, food and beverage, healthcare, high tech, and travel. The Company offers its solutions via a SaaS delivery model as well as on a more limited basis, via perpetual licenses. The Company also provides professional services to implement its software applications as well as business consulting. In addition, the Company provides product maintenance and support to its customers through which they receive unspecified upgrades, maintenance releases and bug fixes during the term of the support period on a when-and-if-available basis.

### 2. Summary of Significant Accounting Policies

The accompanying unaudited condensed consolidated financial statements reflect the application of significant accounting policies as described below and elsewhere in these notes to the condensed consolidated financial statements.

#### Basis of presentation

The accompanying unaudited condensed consolidated financial statements of the Company have been prepared in accordance with generally accepted accounting principles in the United States ("GAAP") for interim financial reporting and applicable quarterly reporting regulations of the Securities and Exchange Commission ("SEC"). In management's opinion, the accompanying interim unaudited condensed consolidated financial statements include all adjustments necessary for a fair statement of the financial position of the Company as of September 30, 2017, the results of operations for the three and nine months ended September 30, 2017 and 2016, and cash flows for the nine months ended September 30, 2017 and 2016.

Certain information and disclosures normally included in the notes to the annual financial statements prepared in accordance with GAAP have been omitted from these interim unaudited condensed consolidated financial statements pursuant to the rules and regulations of the SEC. Accordingly, these unaudited condensed consolidated financial statements should be read in conjunction with the consolidated financial statements in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2016 ("Annual Report") filed with the SEC. The condensed consolidated balance sheet as of December 31, 2016 was derived from the Company's audited consolidated financial statements but does not include all disclosures required under GAAP.

#### Basis of consolidation

The unaudited condensed consolidated financial statements include the accounts of the Company, its wholly owned subsidiaries and a subsidiary where the Company exercises control. All intercompany transactions and balances have been eliminated in consolidation. The functional currency of PROS France SAS, formerly known as Cameleon



Software SA ("PROS France") is the Euro. The financial statements of this subsidiary are translated into U.S. dollars using period-end rates of exchange for assets and liabilities, historical rates of exchange for equity, and average rates of exchange for the period for revenue and expenses. Translation gains (losses) are recorded in accumulated other comprehensive loss as a component of stockholders' equity.

Dollar amounts

The dollar amounts presented in the tabular data within these footnote disclosures are stated in thousands of dollars, except per share amounts, or as noted within the context of each footnote disclosure.

Use of estimates

The Company makes estimates and assumptions in the preparation of its unaudited condensed consolidated financial statements, and its estimates and assumptions may affect the reported amounts of assets and liabilities and the disclosure of

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contingent assets and liabilities at the date of the unaudited condensed consolidated financial statements, and the reported amounts of revenue and expenses during the reporting periods. Actual results could differ from those estimates. The complexity and judgment required in the Company's estimation process, as well as issues related to the assumptions, risks and uncertainties inherent in the application of the percentage-of-completion method of accounting, affect the amounts of revenue, expenses, unbilled receivables and deferred revenue. Estimates are also used for, but not limited to, receivables, allowance for doubtful accounts, useful lives of assets, depreciation and amortization, income taxes and deferred tax asset valuation, valuation of stock options, other current liabilities and accrued liabilities. Numerous internal and external factors can affect estimates. The critical accounting policies related to the estimates and judgments are discussed in the Company's Annual Report under management's discussion and analysis of financial condition and results of operations. There have been no significant changes to the Company's critical accounting policies as described in the Company's Annual Report.

### Revenue recognition

The Company derives its revenues primarily from subscription services fees, professional services, the perpetual licensing of its software products and the associated software maintenance and support services.

The Company commences revenue recognition when all of the following criteria are met:

- there is persuasive evidence of an arrangement;
- the service has been or is being provided to the customer;
- collection of the fee is reasonably assured; and
- the amount of fees to be paid by the customer is fixed and determinable.

### Subscription services revenue

Subscription services revenue is generally recognized ratably over the contractual term of the arrangement beginning on the date that the Company's service is made available to the customer, assuming all other revenue recognition criteria have been met. The Company's subscription contracts do not provide customers with the right to take possession of the software supporting the applications and, as a result, are accounted for as service contracts. Any revenue related to up-front activation or set-up fees are deferred and recognized ratably over the estimated period that the customer benefits from the related services. Direct and incremental costs related to up-front activation or set-up activities are capitalized until the date the Company's service is made available and then expensed ratably over the estimated period that the customer benefits from the related services.

For the Company's subscription services that include professional services, the Company determines whether the professional services have standalone value. Professional services deemed to have standalone value are accounted for separately from subscription services and the subscription services revenue recognition commences on the date that the Company's service is made available to the customer. If determined that the professional services do not have standalone value, the transaction is treated as a single element and the subscription services and professional services revenue is deferred until the customer commences use of the subscription services, and the subscription services revenue is recognized over the remaining term of the arrangement.

### Maintenance and support revenue

Maintenance and support revenue includes post-implementation customer support and the right to unspecified software updates and enhancements on a when-and-if-available basis. The Company recognizes revenue from maintenance arrangements ratably over the period in which the services are provided.

### License revenue

The Company derives the majority of its license revenue from the sale of perpetual licenses. For software license arrangements that do not require significant modification or customization of the underlying software, the Company recognizes software licenses revenues upon software delivery, assuming all other revenue recognition criteria have been met.

The Company evaluates the nature and scope of professional services for each arrangement, and if it determines that the professional services revenue should not be accounted for separately from license revenue, the license revenue is recognized together with the professional services revenue using the percentage-of-completion method or completed contract method. The completed contract method is also used for contracts where there is a risk over final acceptance by the customer or for contracts that are short-term in nature.

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The percentage-of-completion method is measured by the percentage of man-days incurred during the reporting period as compared to the estimated total man-days necessary for each contract for implementation of the software solutions. The Company believes that for each such project, man-days expended in proportion to total estimated man-days at completion represents the most reliable and meaningful measure for determining a project's progress toward completion. Under the Company's fixed-fee arrangements, should a loss be anticipated on a contract, the full amount of the loss is recorded when the loss is determinable.

The Company also licenses software solutions under term license agreements that typically include maintenance during the license term. When maintenance is included for the entire term of the term license, there is no renewal rate and the Company has not established vendor specific objective evidence ("VSOE") of fair value for the maintenance on term licenses. For term license agreements, revenue and the associated costs are deferred until the delivery of the solution and recognized ratably over the remaining license term.

### Professional services revenue

Professional services revenues are generally recognized as the services are rendered for time and material contracts, or on a proportional performance basis for fixed price contracts. The majority of the Company's professional services contracts are on a time and materials basis. Training revenues are recognized as the services are rendered.

For the Company's subscription services that include professional services, the Company determines whether the professional services have standalone value. Professional services deemed to have standalone value are accounted for separately from subscription services and typically recognized as the services are performed. If determined that the professional services do not have standalone value, the transaction is treated as a single element, the professional services revenue is deferred until the customer commences use of the subscription services, and the professional services revenue is recognized over the remaining term of the arrangement.

For software license arrangements that include professional services, the Company determines whether the professional services are considered essential to the functionality of the software using factors such as: the nature of its software products; whether they are ready for use by the customer upon receipt; the nature of professional services; the availability of services from other vendors; whether the timing of payments for license revenue coincides with performance of services; and whether milestones or acceptance criteria exist that affect the realizability of the software license fee. For professional services considered essential to the functionality of the software, the license revenue is recognized together with the professional services revenue using the percentage-of-completion method or completed contract method. The completed contract method is also used for contracts where there is a risk over final acceptance by the customer or for contracts that are short-term in nature.

### Multiple element arrangements

For arrangements with multiple deliverables, the Company evaluates whether the individual deliverables qualify as separate units of accounting. In order to treat deliverables in a multiple deliverable arrangement as separate units of accounting, the deliverables must have standalone value upon delivery. If the deliverables have standalone value upon delivery, the Company accounts for each deliverable separately and revenue is recognized for the respective deliverables as they are delivered.

When multiple deliverables included in an arrangement are separable into different units of accounting, the arrangement consideration is allocated to the identified separate units of accounting based on their relative selling price. Multiple deliverable arrangement accounting guidance provides a hierarchy when determining the relative selling price for each unit of accounting. VSOE of selling price, based on the price at which the item is regularly sold by the vendor on a standalone basis, should be used if it exists. If VSOE of selling price is not available, third-party

evidence ("TPE") of selling price is used to establish the selling price if it exists. If neither VSOE nor TPE exist for a deliverable, arrangements with multiple deliverables can be separated into discrete units of accounting based on the Company's best estimate of selling price ("BESP"). The objective of BESP is to determine the price at which the Company would transact a sale if the product or service were sold on a standalone basis. The amount of arrangement fee allocated is limited by contingent revenues, if any. For transactions that only include software and software-related elements, the Company continues to account for such arrangements under the software revenue recognition standards which require it to establish VSOE of fair value to allocate arrangement consideration to multiple deliverables.

For multiple-element arrangements that contain software and nonsoftware elements such as its subscription services, the Company allocates revenue between the software and software related elements as a group and any nonsoftware elements based on a relative fair value allocation. The Company determines fair value for each deliverable using the selling price hierarchy described above and utilizing VSOE of fair value if it exists.

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The Company applies the residual method to recognize revenue for the delivered elements in standalone software transactions. Under the residual method, the amount of revenue allocated to delivered elements equals the total arrangement consideration, less the aggregate fair value of any undelivered elements, typically maintenance, provided that VSOE of fair value exists for all undelivered elements. VSOE of fair value is based on the price charged when the element is sold separately or, in the case of maintenance, substantive renewal rates for maintenance.

Revenue that has been recognized, but for which the Company has not invoiced the customer, is recorded as unbilled receivables. Invoices that have been issued before revenue has been recognized are recorded as deferred revenue in the accompanying consolidated balance sheets.

### Business Combinations

The Company records tangible and intangible assets acquired and liabilities assumed in business combinations under the acquisition method of accounting. Amounts paid for each acquisition are allocated to the assets acquired and liabilities assumed based on their fair values at the date of acquisition.

Significant management judgments and assumptions are required in determining the fair value of acquired assets and liabilities, particularly acquired intangible assets. The valuation of purchased intangible assets is based upon estimates of the future performance and cash flows from the acquired business. Each asset is measured at fair value from the perspective of a market participant.

The Company uses its best estimates and assumptions to accurately assign fair value to the tangible and intangible assets acquired and liabilities assumed at the acquisition date. The Company's estimates are inherently uncertain and subject to refinement. During the measurement period, which may be up to one year from the acquisition date, the Company may record adjustments to the fair value of these tangible and intangible assets acquired and liabilities assumed, with the corresponding offset to goodwill. In addition, uncertain tax positions and tax-related valuation allowances are initially established in connection with a business combination as of the acquisition date. The Company continues to collect information and reevaluates these estimates and assumptions quarterly and records any adjustments to the Company's preliminary estimates to goodwill, provided that the Company is within the measurement period. Upon the conclusion of the measurement period or final determination of the fair value of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to the Company's condensed consolidated statements of operations.

### Internal-use software

Costs incurred to develop internal-use software during the development stage are capitalized, stated at cost, and depreciated using the straight-line method over the estimated useful lives of the assets. Development stage costs generally include salaries and personnel costs and third-party contractor expenses associated with internal-use software configuration, coding, installation and testing. For the three months ended September 30, 2017 and 2016, the Company capitalized \$0.7 million and \$0.5 million, respectively, and for the nine months ended September 30, 2017 and 2016, the Company capitalized \$2.2 million and \$0.6 million, respectively, of internal-use software development costs related to cloud-based offerings. Capitalized internal-use software development costs related to cloud-based offerings are amortized using the straight-line method over the useful life of the asset. For the three and nine months ended September 30, 2017, the Company amortized an immaterial amount of capitalized internal-use software development costs. For the three and nine months ended September 30, 2016, the Company amortized no capitalized internal-use software development costs. Capitalized software for internal use is included in property and equipment, net in the unaudited condensed consolidated balance sheets. Amortization of capitalized internal-use software development costs, once it commences, is included in cost of subscription revenues in the accompanying unaudited condensed consolidated statements of comprehensive income (loss).

Impairment of long-lived assets

Long-lived assets are reviewed for impairment whenever an event or change in circumstances indicates that the carrying amount of an asset or group of assets may not be recoverable. The impairment review includes comparison of future cash flows expected to be generated by the asset or group of assets with the associated assets' carrying value. If the carrying value of the asset or group of assets exceeds its expected future cash flows (undiscounted and without interest charges), an impairment loss is recognized to the extent that the carrying amount of the asset exceeds its fair value. The Company recorded no impairment charges during the three and nine months ended September 30, 2017 and 2016.

Noncash share-based compensation

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The Company measures all share-based payments to its employees based on the grant date fair value of the awards and recognizes expenses in the Company's unaudited consolidated statement of comprehensive income (loss) on a straight-line basis over the periods during which the recipient is required to perform services (generally over the vesting period of the awards). To date, the Company has granted stock options, Restricted Stock Units ("RSUs"), stock settled Stock Appreciation Rights ("SARs"), and Market Stock Units ("MSUs"). RSUs include (i) time-based awards, and (ii) market-based awards in which the number of shares that vest are based upon attainment of target average per share closing price over a requisite trading period. MSUs are performance-based awards in which the number of shares that vest are based upon the Company's relative stockholder return.

The following table presents the number of shares or units outstanding for each award type as of September 30, 2017 and December 31, 2016, respectively, (in thousands):

Award type	September 30, December 31,	
	2017	2016
Stock options	148	734
Restricted stock units (time-based)	2,180	2,237
Restricted stock units (market-based)	345	460
Stock appreciation rights	391	515
Market stock units	347	342

Stock options, time-based RSUs and SARs vest ratably between one and four years. Market-based RSUs vest if the average trailing closing price of the Company's Common Stock meets certain minimum performance hurdles for at least 105 calendar days prior to September 9, 2020, with 25% vesting at \$27, an additional 25% vesting at \$33, and the remaining 50% vesting at \$41. The actual number of MSUs that will be eligible to vest is based on the total stockholder return of the Company relative to the total stockholder return of the Russell 2000 Index ("Index") over their respective performance periods, as defined by each award's plan documents. The Company did not grant any stock options or SARs during the three and nine months ended September 30, 2017 or 2016.

The fair value of the time-based RSUs is based on the closing price of the Company's stock on the date of grant.

The Company estimates the fair value and the derived service period of the market-based RSUs on the date of grant using a Monte Carlo simulation model. The model requires the use of a number of assumptions including the expected volatility of the Company's stock, its risk-free interest rate and expected dividends. The Company's expected volatility at the date of grant was based on the historical volatility of the Company over the performance period.

The fair value of the market-based RSUs is expensed over the derived service period for each separate vesting tranche. The derived service period for the vesting tranches of the market-based RSUs ranges between 1.01 and 1.98 years.

The Company estimates the fair value of MSUs on the date of grant using a Monte Carlo simulation model. The determination of fair value of the MSUs is affected by the Company's stock price and a number of assumptions including the expected volatilities of the Company's stock and the Index, its risk-free interest rate and expected dividends. The Company's expected volatility at the date of grant was based on the historical volatilities of the Company and the Index over the performance period.

The weighted average assumptions used to value the MSUs granted during the three and nine months ended September 30, 2017 were as follows:

	September 30, 2017
Volatility	45.88%
Risk-free interest rate	1.52%
Expected option life in years	3.10



Dividend yield —

Earnings per share

The Company computes basic earnings (loss) per share by dividing net income (loss) attributable to common stockholders by the weighted average number of common shares outstanding. Diluted earnings (loss) per share is computed by dividing net income (loss) attributable to common stockholders by the weighted average number of common shares and dilutive potential

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common shares then outstanding. Diluted earnings per share reflect the assumed conversion of all dilutive securities, using the treasury stock method. Dilutive potential common shares consist of shares issuable upon the exercise of stock options, shares of unvested restricted stock units, and settlement of stock appreciation rights. When the Company incurs a net loss, the effect of the Company's outstanding stock options, stock appreciation rights and restricted stock units are not included in the calculation of diluted earnings (loss) per share as the effect would be anti-dilutive. Accordingly, basic and diluted net loss per share are identical.

### Short-term investments

The Company's investments are available-for-sale commercial paper and certificate of deposit that are recorded at fair value in the consolidated balance sheets. The Company classifies all commercial paper regardless of original maturity at purchase date as investments. Unrealized gains and losses on available-for-sale securities are recorded, net of tax, as a component of accumulated other comprehensive income (loss), unless impairment is considered to be other-than-temporary. Other-than-temporary unrealized losses on available-for-sale securities are generally recorded in gain (loss) on investments, net, in the consolidated statements of comprehensive income (loss) unless certain criteria are met. The primary factors considered when determining if a charge must be recorded because a decline in the fair value of an investment is other-than-temporary include whether: (i) the fair value of the investment is significantly below the Company's cost basis; (ii) the financial condition of the issuer of the security has deteriorated; (iii) if a debt security, it is probable that the Company will be unable to collect all amounts due according to the contractual terms of the security; (iv) the decline in fair value has existed for an extended period of time; (v) if a debt security, such security has been downgraded by a rating agency; and (vi) the Company has the intent and ability to retain the investment for a period of time sufficient to allow for any anticipated recovery in fair value. Investments with remaining maturities of twelve months or less are classified as short-term investments since they are readily convertible to cash to fund short-term operations. Investments with remaining maturities of more than twelve months are classified as long-term investments. All of the Company's investments had contractual maturities of less than twelve months as of September 30, 2017.

### Cost method investment

Investments in equity securities of privately held companies without readily determinable fair value, where the Company does not exercise significant influence over the investee, are recorded using the cost method of accounting, carrying the investment at historical cost. If there are no identified events or changes in circumstances that might have an adverse effect on the cost method investments, the Company does not estimate the investments' fair value. For all investments, if a decline in the fair value of an investment below the carrying value is determined to be other-than-temporary, such investment is written down to its estimated fair value with a charge to current earnings.

At September 30, 2017 and December 31, 2016, the Company held \$2.0 million of equity securities in a privately held company. This investment is accounted for under the cost method and the Company measures it at fair value on a nonrecurring basis when it is deemed to be other-than-temporarily impaired. The Company estimates fair value of its cost method investment considering available information such as pricing in recent rounds of financing, current cash positions, earnings and cash flow forecasts, recent operational performance and any other readily available market data, which represents level 3 in the fair value hierarchy. As of September 30, 2017, the Company determined there were no other-than-temporary impairments on its cost method investment.

### Fair value measurement

The Company's financial assets that are included in cash and cash equivalents and that are measured at fair value on a recurring basis consisted of \$144.4 million and \$106.3 million at September 30, 2017 and December 31, 2016, respectively, and were invested in treasury money market funds. The fair value of the treasury money market funds is determined based on quoted market prices, which represents level 1 in the fair value hierarchy as defined by

Accounting Standard Codification ("ASC") 820, "Fair Value Measurement and Disclosure."

The Company's short-term investments that are measured at fair value are comprised of zero and \$10.0 million invested in available-for-sale commercial paper as of September 30, 2017 and December 31, 2016, respectively, and zero and \$6.0 million invested in certificate of deposit at September 30, 2017 and December 31, 2016, respectively. The fair value of these accounts is determined based on quoted market prices for similar assets in active markets, which represents level 2 in the fair value hierarchy. The Company recorded an immaterial amount of unrealized gain related to the short-term investments for the three and nine months ended September 30, 2017 and 2016. Reclassification adjustments for realized gain (loss) on available-for-sale securities in net income were immaterial for the three and nine months ended September 30, 2017 and 2016.

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### Deferred revenue and unbilled receivables

Software license and implementation services that have been performed, but for which the Company has not invoiced the customer, are recorded as unbilled receivables, and invoices that have been issued before the software license and implementation, maintenance and subscription services have been performed are recorded as deferred revenue in the accompanying unaudited condensed consolidated balance sheets.

### Credit facility

On January 27, 2017, the Company, through its wholly owned subsidiary PROS, Inc., entered into a Seventh Amendment (the "Seventh Amendment") to the \$50 million secured Credit Agreement ("Revolver"). The Seventh Amendment provides for, among other things, an extension of the maturity date of the Revolver to July 2, 2022, and additional financial covenants with which the Company must comply if the Company's liquidity falls below an increased amount of \$50 million or upon the occurrence of an event of default. The remaining material terms of the Revolver remain unchanged, and are summarized in the Company's Annual Report, Note 14.

As of September 30, 2017, the Company had no outstanding borrowings under the Revolver, and \$0.2 million of unamortized debt issuance costs related to the Revolver is included in prepaid and other current assets and other long-term assets in the condensed consolidated balance sheets. For the three and nine months ended September 30, 2017 and 2016, the Company recorded an immaterial amount of amortization of debt issuance cost which is included in other expense, net in the unaudited condensed consolidated statements of comprehensive income (loss).

### Income taxes

The Company recorded an income tax benefit of \$0.3 million and tax provision of \$0.2 million for the three months ended September 30, 2017 and 2016, respectively, and tax provision of \$0.1 million and \$0.5 million for the nine months ended September 30, 2017 and 2016, respectively, primarily related to foreign income taxes and state taxes not based on income. The effective tax rate for the three and nine months ended September 30, 2017 was 1% and 0%, respectively. The effective tax rate for both the three and nine months ended September 30, 2016 was (1)%. The income tax rates vary from the federal and state statutory rates primarily due to the valuation allowances on the Company's deferred tax assets, the limitation on deductibility of certain officers' compensation, and foreign and state taxes not based on income. During the three months ended September 30, 2017, the Company recognized a deferred tax benefit due to the acquisition of Vayant Travel Technologies, Inc. The recorded deferred tax liability was driven by unamortizable intangible assets that required the company to release \$0.5 million of valuation allowance. The Company estimates its annual effective tax rate at the end of each quarterly period. Jurisdictions with a projected loss for the year where no tax benefit can be recognized due to the valuation allowances on the Company's deferred tax assets are excluded from the estimated annual effective tax rate. The impact of such an exclusion could result in a higher or lower effective tax rate during a particular quarter depending on the mix and timing of actual earnings versus annual projections.

### Recently adopted accounting pronouncements

In March 2016, the FASB issued ASU 2016-09, "Compensation – Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting" which is intended to simplify several aspects of the accounting for share-based payment transactions including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. This standard is effective for interim and annual reporting periods beginning after December 15, 2016. The Company adopted this standard on January 1, 2017. Upon adoption, the Company recognized the previously unrecognized excess tax benefits using the modified retrospective transition method, which resulted in a cumulative-effect adjustment of \$4.2 million to accumulated deficit. The previously

unrecognized excess tax effects were recorded as a deferred tax asset, which was fully offset by a valuation allowance and as such the cumulative adjustment had no net impact on the Company's financial statements. As required by ASU 2016-09, excess tax benefits recognized on stock-based compensation expense are reflected in the condensed consolidated statements of operations as a component of the provision for income taxes on a prospective basis. In addition, ASU 2016-09 allows companies to account for forfeitures as they occur or estimate expected forfeitures over the course of a vesting period; the Company has elected to continue to estimate forfeitures expected to occur to determine the amount of compensation cost to be recognized each period.

#### Recent accounting pronouncements

In May 2014, the FASB issued ASU 2014-09, "Revenue from Contracts with Customers (Topic 606)," which supersedes nearly all existing revenue recognition guidance under GAAP and permits the use of either the retrospective or cumulative effect

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transition method. In August 2015, the FASB issued ASU 2015-14, "Revenue from Contracts with Customers: Deferral of the Effective Date" which deferred the effective date of the new revenue standard for periods beginning after December 15, 2016 to December 15, 2017, with early adoption permitted but not earlier than the original effective date. In March 2016, the FASB issued ASU 2016-08, "Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations" which clarifies the implementation of guidance on principal versus agent considerations. In April 2016, the FASB issued ASU 2016-10, "Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligation and Licensing" which clarifies the implementation of guidance on identifying performance obligations and licensing. In May 2016, the FASB issued ASU 2016-12, "Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients", which clarifies the disclosure requirements for an entity that retrospectively applies the guidance in Topic 606. These standards are effective for the Company in the first quarter of fiscal 2018. The Company expects to adopt this updated standard on a modified retrospective basis and is currently evaluating the effect that the updated standard will have on its consolidated financial statements and related disclosures.

The Company continues to assess all potential impacts of the new standard on its consolidated financial statements and related disclosures, and currently believes the most significant impact relates to its accounting for arrangements that include term-based software licenses bundled with maintenance and support, the deferral of incremental costs of obtaining a contract with a customer, including the period of amortization of such costs, and additional disclosures. Under current GAAP, the revenue attributable to these term-based software licenses is recognized ratably over the term of the arrangement because VSOE does not exist for the undelivered maintenance and support element as it is not sold separately. The requirement to have VSOE for undelivered elements to enable the separation of revenue for the delivered software licenses is eliminated under the new standard. Accordingly, under the new standard, the Company will be required to recognize as revenue a portion of the arrangement fee upon delivery of the software license. In addition, under current GAAP, the Company defers only direct and incremental commission costs to obtain a contract and amortizes those costs over the term of the related contract. Under the new standard, the Company will defer all incremental costs related to the customer contract and will amortize these costs over the expected period of customer benefit. While the Company currently expects revenue related to professional services and subscription services to remain substantially unchanged, it is still in the process of evaluating the impact of the new standard on these types of customer arrangements, including the impact of the deferral of incremental costs of obtaining a contract with a customer.

In February 2016, the FASB issued ASU 2016-02, "Leases (Topic 842)" which requires the lessee to recognize most leases on the balance sheet thereby resulting in the recognition of lease assets and liabilities for those leases currently classified as operating leases. Lessor accounting remains largely unchanged from current guidance, however, ASU 2016-02 provides improvements that are intended to align lessor accounting with the lessee model and with updated revenue recognition guidance. This standard is effective for interim and annual reporting periods beginning after December 15, 2018. The Company is currently assessing the impact of ASU 2016-02 on its condensed consolidated financial statements.

In August 2016, the FASB issued ASU 2016-15, "Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments" which is intended to reduce the diversity in practice on classification of certain transactions in the statement of cash flows. This standard is effective for interim and annual reporting periods beginning after December 15, 2017; early adoption is permitted. The Company is currently assessing the impact of ASU 2016-15 on its condensed consolidated financial statements.

In January 2017, the FASB issued ASU 2017-04, "Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment", which eliminates step two from the goodwill impairment test. Under the amendments in this standard, an entity should recognize an impairment charge for the amount by which the carrying amount of a reporting unit exceeds its fair value; however, the loss recognized should not exceed the total amount of goodwill

allocated to that reporting unit. The standard is effective for interim and annual reporting periods beginning after December 15, 2019; earlier adoption is permitted for goodwill impairment tests performed on testing dates after January 1, 2017. The Company is currently assessing the impact of ASU 2017-04 on its condensed consolidated financial statements.

With the exception of the new standards discussed above, there have been no other recent accounting pronouncements or changes in accounting pronouncements during the nine months ended September 30, 2017, as compared to the recent accounting pronouncements described in the Company's Annual Report, that are of significance or potential significance to the Company.

### 3. Business Combination

On August 3, 2017, the Company acquired Vayant Travel Technologies, Inc. ("Vayant"), a privately held company based in Sofia, Bulgaria, for total cash consideration, net of cash acquired, of approximately \$34.1 million. Vayant is a cloud software company that provides advanced shopping, merchandising and inspirational travel solutions. The acquisition of Vayant strengthens the Company's modern commerce solutions for the travel industry and positions it to deliver greater value to its travel customers

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through an end-to-end offer optimization solution designed to help travel companies deliver personalized offers and expanded choices that drive loyalty and growth.

Since the acquisition date, the Company has included \$1.3 million of revenue and \$0.5 million of net loss related to Vayant in its consolidated income statement. During the quarter ended September 30, 2017, the Company incurred acquisition-related costs of \$0.6 million consisting primarily of advisory, legal fees, and retention of key employees.

All of the assets acquired and the liabilities assumed in the transaction have been recognized at their acquisition date fair values at August 3, 2017.

The preliminary allocation of the total purchase price for Vayant is as follows (in thousands):

Cash	\$	1,822	
Other current assets		1,235	
Noncurrent assets		86	
Intangibles		18,600	
Goodwill		17,052	
Accounts payable and accrued liabilities	(1,668		)
Deferred revenue	(600		)
Deferred tax liability	(526		)
Noncurrent liabilities	(49		)
Net assets acquired	\$	35,952	

The following are the identifiable intangible assets acquired (in thousands) and their respective useful lives:

	Amount	Useful Life
	(years)	
Developed technology	\$11,600	7
Customer relationships	7,000	5
Total	\$18,600	

In performing the preliminary purchase price allocation, the Company considered, among other factors, its anticipated future use of the acquired assets, analysis of historical financial performance, and estimates of future cash flows from Vayant's products and services. The allocation resulted in acquired intangible assets of \$18.6 million. The acquired intangible assets consisted of developed technology and customer relationships and were valued using the income approach in which the after-tax cash flows are discounted to present value. The cash flows are based on estimates used to price the transaction, and the discount rates applied were benchmarked with reference to the implied rate of return from the transaction model as well as the weighted average cost of capital. Additionally, the Company assumed certain liabilities in the acquisition, including deferred revenue to which a fair value of \$0.6 million was ascribed using a cost-plus profit approach.

The Company has made a preliminary determination that \$0.5 million of net deferred tax liabilities were assumed on the acquisition date. The deferred tax liability is comprised of the value of intangible assets partially offset by a deferred tax asset related to net operating losses.



The excess of the purchase price over the estimated amounts of net assets as of the effective date of the acquisition was allocated to goodwill. The factors contributing to the recognition of the amount of goodwill are based on several strategic and synergistic benefits that are expected to be realized from the Vayant acquisition. These benefits include the expectation that the combined company's complementary products will strengthen the Company's modern commerce solutions for the travel industry.

The Company believes the combined company will benefit from a broader global presence and, with the Company's direct sales force and larger channel coverage, significant cross-selling opportunities. None of the goodwill is expected to be currently deductible for tax purposes. In accordance with applicable accounting standards, goodwill will not be amortized but instead will be tested for impairment at least annually, or more frequently if certain indicators are present. In the event that the management of the combined company determines that the value of goodwill has become impaired, the combined company will incur an accounting charge for the amount of the impairment during the fiscal quarter in which the determination is made.

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## Pro Forma Financial Information

The unaudited financial information in the table below summarizes the combined results of operations of the Company and Vayant, on a pro forma basis, as though the Company had acquired Vayant on January 1, 2016. The pro forma information for all periods presented also includes the effect of business combination accounting resulting from the acquisition, including amortization charges from acquired intangible assets.

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands, except earnings per share)	2017	2016	2017	2016
Total revenue	\$42,738	\$40,316	\$127,522	\$118,770
Net loss	(23,150 )	(17,081 )	(64,496 )	(61,815 )
Earnings per share - basic and diluted	\$(0.73 )	\$(0.56 )	\$(2.05 )	\$(2.04 )

## 4. Earnings per Share

The following table sets forth the computation of basic and diluted earnings per share for the three and nine months ended September 30, 2017 and 2016:

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands, except per share data)	2017	2016	2017	2016
Numerator:				
Net loss	\$(21,226)	\$(15,708)	\$(60,946)	\$(56,712)
Denominator:				
Weighted average shares (basic)	31,867	30,469	31,527	30,341
Dilutive effect of potential common shares	—	—	—	—
Weighted average shares (diluted)	31,867	30,469	31,527	30,341
Basic loss per share	\$(0.67 )	\$(0.52 )	\$(1.93 )	\$(1.87 )
Diluted loss per share	\$(0.67 )	\$(0.52 )	\$(1.93 )	\$(1.87 )

Dilutive potential common shares consist of shares issuable upon the exercise of stock options, settlement of SARs, and the vesting of RSUs and MSUs. Potential common shares determined to be antidilutive and excluded from diluted weighted average shares outstanding were approximately 2.0 million and 2.0 million for the three months ended September 30, 2017 and 2016, respectively, and 2.2 million and 1.9 million for the nine months ended September 30, 2017 and 2016, respectively. Basic shares were used to calculate loss per share for the three and nine months ended September 30, 2017 and 2016.

Since the Company has the intention and ability to settle the principal amount of its Notes (see Note 5) in cash, the treasury stock method is expected to be used for calculating any potential dilutive effect of the conversion spread on diluted net income per share, if applicable. The conversion spread will have a dilutive impact on diluted net income per share of common stock when the average market price of common stock for a given period exceeds the conversion price of \$33.79 and \$48.63 per share, for the 2019 Notes and 2047 Notes, respectively.

## 5. Noncash Share-based Compensation

During the three months ended September 30, 2017, the Company granted 10,788 RSUs with a weighted average grant-date fair value of \$26.09 per share. The Company did not grant any MSUs, stock options and SARs during the three months ended September 30, 2017.

During the nine months ended September 30, 2017, the Company granted 902,178 RSUs with a weighted average grant-date fair value of \$21.43 per share. The Company also granted 110,100 MSUs with a weighted average grant-date fair value of \$26.99 to certain executive employees during the nine months ended September 30, 2017. These MSUs vest on March 1, 2020 and the actual number of MSUs that will be eligible to vest is based on the total stockholder return of the Company relative to the total stockholder return of the Index over the Performance Period, as defined by each award's plan documents or individual award agreements. The Company did not grant any stock options or SARs during the nine months ended September 30, 2017.

Share-based compensation expense is allocated to expense categories on the unaudited condensed consolidated statements of comprehensive income (loss). The following table summarizes share-based compensation expense included in the Company's

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unaudited condensed consolidated statements of comprehensive income (loss) for the three and nine months ended September 30, 2017 and 2016:

	Three Months Ended September 30, 2017		Nine Months Ended September 30, 2016	
Share-based compensation:				
Cost of revenue	\$479	\$544	\$1,569	\$1,720
Operating expenses:				
Selling and marketing	909	(918 )	3,313	2,559
General and administrative	2,864	2,235	8,546	6,267
Research and development	1,319	1,331	4,237	3,899
Total included in operating expenses	5,092	2,648	16,096	12,725
Total share-based compensation expense	\$5,571	\$3,192	\$17,665	\$14,445

In January 2017, the number of shares available for issuance increased by 900,000 to 10,868,000 under an evergreen provision in the Company's 2007 Equity Incentive Plan ("2007 Stock Plan"). The 2007 Stock Plan expired on March 26, 2017. On March 24, 2017, the Board of Directors adopted the 2017 Equity Incentive Plan (2017 Stock Plan), and recommended that the Company's stockholders approve the 2017 Stock Plan. The 2017 Stock Plan was approved by the stockholders in May 2017 and reserved an aggregate amount of 2,500,000 shares for issuance. As of September 30, 2017, 2,489,212 shares remain available for issuance under the 2017 Stock Plan.

At September 30, 2017, the Company had an estimated \$35.4 million of total unrecognized compensation costs related to share-based compensation arrangements. These costs will be recognized over a weighted average period of 2.4 years.

The Company's Employee Stock Purchase Plan ("ESPP") provides for eligible employees to purchase shares on an after-tax basis in an amount between 1% and 10% of their annual pay: (i) on June 30 of each year at a 15% discount of the fair market value of the Company's common stock on January 1 or June 30, whichever is lower, and (ii) on December 31 of each year at a 15% discount of the fair market value of the Company's common stock on July 1 or December 31, whichever is lower. An employee may not purchase more than \$5,000 in either of the six-month measurement periods described above or more than \$10,000 annually. During the three and nine months ended September 30, 2017, the Company issued 41,282 and 92,209 shares, respectively, under the ESPP. As of September 30, 2017, 291,101 shares remain authorized and available for issuance under the ESPP. As of September 30, 2017, the Company held approximately \$0.5 million on behalf of employees for future purchases under the ESPP, and this amount was recorded in accrued liabilities in the Company's unaudited condensed consolidated balance sheet.

## 6. Convertible Debt

The Company issued \$143.8 million principal amount of convertible senior notes in December 2014 (the "2019 Notes") and \$106.3 million principal amount of convertible senior notes in June 2017 (the "2047 Notes" and collectively with the 2019 Notes, the "Notes"). The interest rates for the Notes are fixed at 2.0% per annum. Interest is payable semi-annually in arrears on June 1 and December 1 of each year, commencing on June 1, 2015 for the 2019 Notes, and on December 1, 2017 for the 2047 Notes. The 2019 Notes mature on December 1, 2019, unless redeemed or converted in accordance with their terms prior to such date. The 2047 Notes mature on June 1, 2047, unless repurchased, redeemed or converted in accordance with their terms prior to such date.

Each \$1,000 of principal of the 2019 Notes will initially be convertible into 29.5972 shares of the Company's common stock, which is equivalent to an initial conversion price of approximately \$33.79 per share. Each \$1,000 of principal amount at maturity of the 2047 Notes had an issue price of \$880, and will initially be convertible into 20.5624 shares of the Company's common stock, which is equivalent to an initial conversion price of approximately \$48.63 per share. The initial conversion price for each of the Notes is subject to adjustment upon the occurrence of certain specified events. An amount equal to the difference between the issue price and the principal amount at maturity will accrete to the 2047 Notes in accordance with the schedule set forth in the 2047 Notes. The issue price plus such accreted amount of the 2047 Notes is referred to herein as the "accreted principal amount." On June 1, 2022, the accreted principal amount will accrete to 100% of the principal amount at maturity.

The Notes are each general unsecured obligations and rank senior in right of payment to all of the Company's indebtedness that is expressly subordinated in right of payment to the Notes, rank equally in right of payment with all of the Company's existing and future liabilities that are not so subordinated, are effectively junior to any of the Company's secured indebtedness to the extent

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of the value of the assets securing such indebtedness and are structurally subordinated to all indebtedness and other liabilities (including trade payables but excluding intercompany obligations owed to the Company or its subsidiaries).

On or after September 1, 2019 to the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert all or any portion of their 2019 Notes regardless of the contingent conversion conditions described herein. Upon conversion, the Company will pay or deliver cash, shares of its common stock or a combination of cash and shares of its common stock, at its election, as described in the indenture governing the 2019 Notes.

On or before June 1, 2021, and subject to the satisfaction of certain conditions, the Company is entitled to elect to redeem all or any portion of the 2047 Notes at a redemption price equal to 100% of the accreted principal amount of the 2047 Notes, plus accrued and unpaid interest to, but excluding, the redemption date, if the daily volume weighted average price of the Company's common stock is greater than or equal to 130% of the conversion price for at least 20 trading days during any 30 consecutive trading day period. After June 1, 2021, the Company will be entitled to elect to redeem all or any portion of the 2047 Notes (without regard to the price of the Company's common stock) at a redemption price equal to the then current accreted principal amount of the 2047 Notes, plus accrued and unpaid interest to, but excluding, the redemption date.

Holders may convert their 2019 Notes at their option at any time prior to the close of business on the business day immediately preceding September 1, 2019 only under the following circumstances:

- during any calendar quarter commencing after the calendar quarter ending on March 31, 2015, if the last reported sale price of the common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day;
- during the five consecutive business day period immediately following any five consecutive trading day period in which the trading price per \$1,000 principal amount of 2019 Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of the Company's common stock and the conversion rate on each such trading day; or
- upon the occurrence of specified corporate events.

Holders may convert their 2047 Notes at their option on any day prior to the close of business on the business day immediately preceding March 1, 2047 under the following circumstances:

- during any calendar quarter commencing after the calendar quarter ending September 30, 2017, if the last reported sale price of the Company's common stock for 20 or more trading days (whether or not consecutive) in a period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter exceeds 130% of the applicable conversion price in effect on each such trading day;
- during the five consecutive business day period immediately following any five consecutive trading day period (the "Measurement Period") in which the trading price per 2047 Note for each day of that Measurement Period was less than 98% of the product of the last reported sale price of the Company's common stock and the conversion rate on each such day; or
- upon the occurrence of specified corporate events.

The 2047 Notes will also be convertible, regardless of the foregoing circumstances, at any time from, and including, March 1, 2047 until the close of business on the second scheduled trading day immediately preceding the applicable maturity date. Each holder of the 2047 Notes has the right to require the Company to repurchase for cash all or any

portion of such holder's 2047 Notes on June 1, 2022 at a price per \$1,000 principal amount of the 2047 Notes equal to the accreted principal amount at maturity plus accrued and unpaid interest to, but excluding, the repurchase date.

If a fundamental change (as defined in the relevant indenture governing the applicable series of Notes) occurs prior to the maturity date, holders of each of the 2019 Notes and 2047 Notes may require the Company to repurchase all or a portion of their notes for cash at a repurchase price equal to 100% of the principal amount at maturity of the Notes, plus any accrued and unpaid interest to, but excluding, the repurchase date. If such a fundamental change occurs prior to June 1, 2022, holders of the 2047 Notes may also require the Company to repurchase all or a portion of their notes for cash at a repurchase price equal to the then current accreted principal amount of the Notes, plus any accrued and unpaid interest to, but excluding, the repurchase date.

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In addition, if specific corporate events occur prior to the applicable maturity date, the Company will be required to increase the conversion rate for holders who elect to convert their notes in certain circumstances. Holders who convert their 2047 Notes in connection with a Make-Whole Fundamental Change (as defined in the indenture governing the 2047 Notes) or in connection with a redemption of such 2047 Notes on or prior to June 1, 2021 will, under certain circumstances, be entitled to a make-whole premium in the form of an increase in the conversion rate determined by reference to a make-whole table set forth in such indenture.

As of September 30, 2017, the 2019 Notes and the 2047 Notes are not yet convertible.

In accordance with accounting guidance on embedded conversion features, the Company valued and bifurcated the conversion options associated with each of the 2019 Notes and 2047 Notes from the respective host debt instrument, which is referred to as debt discount and recorded the conversion option of each of the Notes in stockholders' equity. The equity component for each Note is not remeasured as long as such Note continues to meet the conditions for equity classification.

In accounting for the transaction costs for each of the notes issuance, the Company allocated the costs incurred to the liability and equity components in proportion to the allocation of the proceeds from issuance to the liability and equity components. Issuance costs attributable to the liability component, totaling \$4.3 million for the 2019 Notes and \$2.7 million for the 2047 Notes, are being amortized to expense over the expected life of each notes using the effective interest method. Issuance costs attributable to the equity component related to the conversion option, totaling \$1.2 million for the 2019 Notes and \$0.3 million for the 2047 Notes, were netted with the equity component in stockholders' equity. As of September 30, 2017, no cash payments were made for the debt issuance cost related to the 2047 Notes.

The Notes consist of the following (in thousands):

	September 30, 2017	December 31, 2016
Liability component:		
Principal	\$250,000	\$143,750
Less: debt discount and issuance cost, net of amortization	(39,688 )	(21,451 )
Net carrying amount	\$210,312	\$122,299
Equity component (1)	\$37,560	\$28,714

(1) Recorded within additional paid-in capital in the consolidated balance sheet. As of September 30, 2017, it included \$28.7 million and \$8.8 million related to the 2019 Notes and the 2047 Notes, respectively, net of \$1.2 million and \$0.3 million issuance cost in equity, respectively.

The following table sets forth total interest expense recognized related to the Notes (in thousands):

	Three Months Ended		Nine Months Ended	
	September 30, 2017	September 30, 2016	September 30, 2017	September 30, 2016
2.0% coupon	\$1,250	\$719	\$2,741	\$2,157
Amortization of debt issuance costs	340	209	782	620
Amortization of debt discount	2,504	1,411	5,555	4,166
Total	\$4,094	\$2,339	\$9,078	\$6,943

As of September 30, 2017 and December 31, 2016, the fair value of the principal amount of the Notes was \$239.7 million and \$141.1 million, respectively. The estimated fair value was determined based on inputs that are observable



in the market or that could be derived from, or corroborated with, observable market data, including the Company's stock price and interest rates, which represents level 2 in the fair value hierarchy.

As of September 30, 2017, the remaining life of the 2019 Notes and the 2047 Notes is approximately 26 months and 56 months, respectively.

#### Note Hedge and Warrant Transactions

Concurrently with the offering of the 2019 Notes, the Company entered into separate convertible note hedge (the "Note Hedge") and warrant (the "Warrant") transactions. Taken together, the purchase of the Note Hedge and the sale of the Warrant are

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intended to offset any actual dilution from the conversion of the 2019 Notes and to effectively increase the overall conversion price of the 2019 Notes from \$33.79 to \$45.48 per share. The total cost of the Note Hedge transaction was \$29.4 million. The Company received \$17.1 million in cash proceeds from the sale of the Warrant.

Pursuant to the Warrants, if the average market value per share of the Company's common stock for the reporting period, as measured under the Warrant, exceeds the strike price of the Warrant, the Warrant will have a dilutive effect on the Company's earnings per share. Holders of the 2019 Notes and Note Hedge will not have any rights with respect to the Warrant, as the Note Hedge is not part of the 2019 Notes or the Warrant. The Warrant is not part of the 2019 Notes or Note Hedge. Both the Note Hedge and Warrant have been accounted for as part of additional paid-in capital.

## 7. Commitments and Contingencies

## Litigation

In the ordinary course of business, the Company regularly becomes involved in contract and other negotiations and, in more limited circumstances, becomes involved in legal proceedings, claims and litigation. The outcomes of these matters are inherently unpredictable. The Company is not currently involved in any outstanding litigation that it believes, individually or in the aggregate, will have a material adverse effect on its business, financial condition, results of operations or cash flows.

## Purchase commitments

In the ordinary course of business, the Company enters in various purchase commitments for goods and services.

In June 2017, the Company entered in a noncancelable agreement with a computing infrastructure vendor that expires on June 30, 2020. The purchase commitment as of September 30, 2017 was \$19.7 million for the remaining period under the three-year agreement.

## Lease commitments

The Company leases office space and office equipment under noncancelable operating leases that expire at various dates. As a result of the Vayant acquisition, the Company assumed an operating lease in Sofia, Bulgaria for office space that expires in early 2018. In August 2017, the Company entered into a new operating lease in Sofia to replace the expiring Sofia lease.

As of September 30, 2017, the future minimum lease commitments related to lease agreements were as follows:

Year Ending December 31,	Amount
Remaining 2017	\$569
2018	3,553
2019	2,923
2020	1,443
2021	957
2022 and thereafter	718
Total minimum lease payments	\$10,163

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

The terms “we,” “us,” “PROS“ and “our” refer to PROS Holdings, Inc. and all of its subsidiaries that are consolidated in conformity with generally accepted accounting principles in the United States.

This management's discussion and analysis of financial condition and results of operations should be read along with the unaudited condensed consolidated financial statements and unaudited notes to condensed consolidated financial statements included in Item 1 of this Quarterly Report on Form 10-Q, as well as the audited consolidated financial statements and notes to consolidated financial statements and management's discussion and analysis of financial condition and results of operations set forth in our Annual Report.

Overview

PROS is a cloud software company powering the shift to modern commerce by helping companies create personalized and frictionless buying experiences for their customers. Fueled by dynamic pricing science and machine learning, our solutions make it possible for companies to price, configure and sell their products and services in an omnichannel environment with speed, precision and consistency. Our customers, who are leaders in their markets, benefit from decades of data science expertise infused into our industry solutions. We also provide professional services to implement our software solutions.

Q3 2017 Financial Overview

We continue to reach key milestones in our cloud transformation efforts originally announced in June 2015. In the third quarter of 2017, we continued to make substantial progress in the execution of our cloud-first strategy, as our subscription revenue increased by 60% for the three months ended September 30, 2017 as compared to the same period in 2016, and our recurring revenue, which consists of maintenance and subscription revenue, grew by 20% over the third quarter of 2016, and made up 79% of total revenue for the three months ended September 30, 2017.

In August 2017, we acquired Vayant Travel Technologies, Inc. ("Vayant"), a privately held company based in Sofia, Bulgaria. Vayant is a cloud software company that provides advanced shopping, merchandising and inspirational travel solutions. The acquisition of Vayant strengthens our modern commerce solutions for the travel industry and positions us to deliver greater value to our travel customers through an end-to-end offer optimization solution designed to help travel companies deliver personalized offers and expanded choices that drive loyalty and growth.

Cash used in operating activities was \$29.8 million for the nine months ended September 30, 2017, as compared to \$7.2 million for the nine months ended September 30, 2016. The increase in net cash used in operating activities was primarily due to the net impact of working capital changes, mainly driven by a decrease in operating cash provided by accounts receivable of approximately \$13.0 million as a result of \$12.9 million of cash generated in the nine months ended September 30, 2016 due to improved collections. In addition, operating cash outflow was impacted by an increase in our prepaid assets for payments for cloud infrastructure and a decrease in accrued payroll and other employee benefits due to an increase in the annual incentive paid in the first quarter of 2017 over the amount paid in the first quarter of 2016.

Free cash flow is a key metric to assess the strength of our business. Free cash flow is a non-GAAP financial measure which is defined as net cash provided or used by operating activities, less additions to property, plant and equipment, purchases of other (non-acquisition-related) intangible assets and capitalized internal-use software development costs. We believe free cash flow may be useful to investors and others in evaluating the amount of cash generated by our business operations. Free cash flow use for the three months ended September 30, 2017 was \$9.8 million, compared to

free cash flow of \$0.5 million for the three months ended September 30, 2016. The three-month decrease was primarily attributable to a \$10.8 million decrease in operating cash flow. Free cash flow use for the nine months ended September 30, 2017 was \$33.2 million, compared to \$14.3 million for the nine months ended September 30, 2016. The nine-month decrease was primarily attributable to a \$22.7 million decrease in operating cash flow due to our shift to a subscription based revenue model. The following is a reconciliation of free cash flow to the most comparable GAAP measure, net cash used in operating activities:

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	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Net cash used in operating activities	\$(8,539)	\$2,213	\$(29,848)	\$(7,159)
Purchase of property and equipment	(540)	(1,185)	(1,235)	(6,524)
Purchase of intangible assets	(75)	—	(75)	—
Capitalized internal-use software development costs	(688)	(497)	(1,996)	(569)
Free Cash Flow	\$(9,842)	\$531	\$(33,154)	\$(14,252)

Total deferred revenue was \$91.8 million as of September 30, 2017, as compared to \$79.7 million as of December 31, 2016, an increase of \$12.0 million, or 15%, primarily due to an increase in subscription deferred revenue.

## Revenue by Geography

The following geographic information is presented for the three and nine months ended September 30, 2017 and 2016. We categorize geographic revenues based on the location of the customer's headquarters. Because our contracts are predominately denominated in U.S. dollars, we have limited exposure to foreign currency exchange risk as discussed under Item 3 "Quantitative and Qualitative Disclosures About Market Risk - Foreign Currency Exchange Risk".

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2017		2016		2017		2016	
	Revenue	Percent	Revenue	Percent	Revenue	Percent	Revenue	Percent
United States of America	\$15,829	38 %	\$13,436	35 %	\$46,858	38 %	\$41,618	37 %
Europe	12,574	30 %	10,379	27 %	35,056	29 %	32,447	29 %
The rest of the world	13,534	32 %	14,569	38 %	40,558	33 %	39,285	35 %
Total revenue	\$41,937	100 %	\$38,384	100 %	\$122,472	100 %	\$113,350	100 %

## Opportunities, Trends and Uncertainties

We have noted opportunities, trends and uncertainties that we believe are particularly significant to understand our financial results and condition.

We believe our market is large and underpenetrated and therefore we intend to continue investing for long-term growth. We have invested, and expect to continue to invest, in product development to enhance our existing technologies and develop new applications and technologies. In addition, we plan to continue to expand our ability to sell our subscription offerings globally through investments in sales and marketing and cloud support and infrastructure. These investments will increase our costs on an absolute basis in the near-term.

Since 2016, we have sold more subscription-based solutions and very few perpetual licenses as part of our cloud strategy, and we expect this trend to continue. This increase in the sales of subscription-based solutions has resulted in an increase in our subscription revenue, and deferred more of our revenue recognition to later periods than we experienced prior to the announcement of our cloud-first strategy in 2015. We also expect that the trend in sales of subscription-based solutions will result in a decrease in our maintenance and support revenue over time.

Since 2016, the global economic environment has continued to show signs of uncertainty regarding continued future domestic and global economic growth. Despite generally strong performance in capital markets, certain foreign countries continue to face significant economic, political and social crises, and it is possible that these crises could result in economic deterioration in the markets in which we operate. During times of uncertain economic conditions,

we generally experience longer sales cycles, increased scrutiny on purchasing decisions and overall cautiousness by customers. We believe that our industry-specific solutions and innovative technology will enable us to stay competitive in a challenging economic environment as business leaders generally focus on projects that quickly deliver value during uncertain economic conditions.

Our income tax rates vary from the federal and state statutory rates due to the valuation allowances on our deferred tax assets and foreign withholding taxes; changing tax laws, regulations, and interpretations in multiple jurisdictions in which we operate; changes to the financial accounting rules for income taxes; unanticipated changes in tax rates; differences in accounting and tax treatment of our equity-based compensation and the tax effects of purchase accounting for acquisitions. We expect this fluctuation in income tax rates to continue as well as its potential impact on our results of operations.

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## Results of Operations

The following table sets forth certain items in our Condensed Consolidated Statements of Comprehensive Income (Loss) as a percentage of total revenues for the three and nine months ended September 30, 2017 and 2016:

	Three Months Ended September 30, 2017		Nine Months Ended September 30, 2016	
Revenue:				
Subscription	38	% 26	% 34	% 24
Maintenance and support	41	46	43	45
Total subscription, maintenance and support	79	72	77	69
License	1	6	3	7
Services	20	22	20	24
Total revenue	100	100	100	100
Cost of revenue:				
Subscription	19	13	16	11
Maintenance and support	7	9	7	9
Total cost of subscription, maintenance and support	26	21	23	20
License	—	—	—	—
Services	17	19	18	22
Total cost of revenue	42	41	41	42
Gross profit	58	59	59	58
Operating Expenses:				
Selling and marketing	40	36	41	42
General and administrative	25	24	25	25
Research and development	33	34	35	35
Acquisition-related	1	—	1	—
Total operating expenses	100	93	101	102
Convertible debt interest and amortization	(10)	(6)	(7)	(6)
Other income (expense), net	1	—	—	—
Loss before income tax provision	(51)	(40)	(50)	(50)
Income tax (benefit) provision	(1)	1	—	—
Net loss	(51)%	(41)%	(50)%	(50)%

## Revenue:

	Three Months Ended September 30,				Nine Months Ended September 30,			
(Dollars in thousands)	2017	2016	\$	%	2017	2016	\$	%
Subscription	\$15,809	\$9,852	\$5,957	60%	\$41,457	\$27,196	\$14,261	52%
Maintenance and support	17,124	17,666	(542)	(3)%	52,332	51,103	1,229	2%
Total subscription, maintenance and support	32,933	27,518	5,415	20%	93,789	78,299	15,490	20%
License	603	2,419	(1,816)	(75)%	3,883	8,178	(4,295)	(53)%
Services	8,401	8,447	(46)	(1)%	24,800	26,873	(2,073)	(8)%
Total revenue	\$41,937	\$38,384	\$3,553	9%	\$122,472	\$113,350	\$9,122	8%

Subscription revenue. Subscription revenue increased primarily due to an increase in the number of customers purchasing our subscription services and existing customers purchasing additional products and services. The total number of customers generating subscription revenue increased 49% and 40%, respectively, for the three and nine months ended September 30, 2017.



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In addition, the increase in subscription revenue included \$1.2 million related to our acquisition of Vayant. We expect our subscription revenue will continue to increase as we focus on subscription based sales and phase out perpetual license offerings.

Maintenance and support revenue. The three-month decrease in maintenance and support revenue was principally the result of several customers converting their maintenance contracts to subscription as part of our cloud strategy and to a lesser extent the timing of certain cash collections, as a portion of our maintenance contracts are recognized on a cash basis. The nine-month increase in maintenance and support revenue was principally a result of the timing of certain cash collections. These maintenance contracts may create some variability in maintenance revenue. As a result of our cloud strategy, we expect that maintenance revenue will decline over time as we sell fewer licenses and more subscription services and convert existing maintenance contracts to the cloud.

License revenue. Our license revenue depends on the amount of perpetual licenses sold in the period and the timing of license revenue recognition. As a result of our cloud strategy, for the three and nine months ended September 30, 2017, we sold fewer perpetual licenses and experienced a corresponding decrease in license revenue, which included a decrease of \$1.9 million and \$5.0 million, respectively, in license revenue recognized on a percentage of completion basis, partially offset by an increase of approximately \$0.1 million and \$0.7 million, respectively, in license revenue recognized upon software delivery. As a result of our cloud strategy, we expect to sell fewer licenses and more subscription services, resulting in lower future license revenue and higher subscription services revenue.

Services revenue. Services revenue remained effectively unchanged for the three months ended September 30, 2017. Services revenue decreased for the nine months ended September 30, 2017 primarily as a result of large customer implementations completed in 2016. The decrease was also due to lower levels of professional services required for our new subscription sales, and professional services revenue on certain subscription contracts which is deferred until the customer commences use of the subscription because the professional services were deemed not to have standalone value. Services revenue can vary from period to period depending on different factors, including the level of professional services required to implement our solutions, the timing of services revenue recognition on certain subscription contracts and any additional professional services requested from our customers during a particular period.

Cost of revenue and gross profit:

	Three Months				Nine Months			
	Ended September 30,		Variance		Ended September 30,		Variance	
(Dollars in thousands)	2017	2016	\$	%	2017	2016	\$	%
Cost of subscription	\$7,868	\$4,808	\$3,060	64 %	\$19,605	\$12,342	\$7,263	59 %
Cost of maintenance and support	2,859	3,416	(557 )	(16)%	8,886	10,266	(1,380 )	(13)%
Total cost of subscription, maintenance and support	10,727	8,224	2,503	30 %	28,491	22,608	5,883	26 %
Cost of license	73	38	35	92 %	210	199	11	6 %
Cost of services	6,924	7,380	(456 )	(6 )%	21,718	24,594	(2,876 )	(12)%
Total cost of revenue	17,724	15,642	2,082	13 %	50,419	47,401	3,018	6 %
Gross profit	\$24,213	\$22,742	\$1,471	6 %	\$72,053	\$65,949	\$6,104	9 %

Cost of subscription. The three and nine-month increase in cost of subscription was primarily attributable to an increase of \$2.8 million and \$6.8 million, respectively, in infrastructure cost to support our current and anticipated subscription customer base, which included \$1.1 million related to the acquisition of Vayant. The remaining increase in cost of subscription for the three and nine months of \$0.3 million and \$0.5 million, respectively, was related to personnel cost growth commensurate with our subscription revenue growth. The subscription gross profit percentage for the three months ended September 30, 2017 and 2016, was 50% and 51%, respectively. The subscription gross

profit percentage for the nine months ended September 30, 2017 and 2016, was 53% and 55%, respectively.

Cost of maintenance and support. The decrease in cost of maintenance and support was primarily attributable to a decrease in personnel cost mainly due to efficiencies in labor and less maintenance customers. The maintenance and support gross profit percentage was 83% and 81% for the three months ended September 30, 2017 and 2016, respectively. The maintenance and support gross profit percentage was 83% and 80% for the nine months ended September 30, 2017 and 2016, respectively.

Cost of license. Cost of license consists of third-party fees for licensed software and remained consistent for the three and nine months ended September 30, 2017 and 2016. License gross profit percentages for the three months ended September 30,

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2017 and 2016, were 88% and 98%, respectively. License gross profit percentages for the nine months ended September 30, 2017 and 2016, were 95% and 98%, respectively.

Cost of services. The three and nine-month decrease in cost of services was primarily attributable to a decrease in personnel cost used in our software implementations of \$0.3 million and \$2.3 million, respectively, and a decrease in other overhead expenses of \$0.2 million and \$0.6 million, respectively. Services gross profit percentages for the three months ended September 30, 2017 and 2016, were 18% and 13%, respectively. Services gross profit percentages for the nine months ended September 30, 2017 and 2016, were 12% and 8%, respectively. Services gross profit percentages can vary from period to period depending on different factors, including the level of professional services required to implement our solutions, our effective man-day rates and the utilization of our professional services personnel.

Gross profit. The increase in overall gross profit for the three and nine months ended September 30, 2017 was primarily attributable to an increase of 9% and 8%, respectively, in total revenue as compared to the same periods in 2016.

## Operating expenses:

	Three Months		Variance		Nine Months Ended		Variance	
	Ended September 30, 2017	2016	\$	%	September 30, 2017	2016	\$	%
(Dollars in thousands)								
Selling and marketing	\$16,980	\$13,641	\$3,339	24 %	\$50,625	\$47,725	\$2,900	6 %
General and administrative	10,324	9,253	1,071	12 %	30,514	27,910	2,604	9 %
Research and development	14,046	12,964	1,082	8 %	42,429	39,454	2,975	8 %
Acquisition-related	613	—	613	nm	613	—	613	nm
Total operating expenses	\$41,963	\$35,858	\$6,105	17 %	\$124,181	\$115,089	\$9,092	8 %

Selling and marketing expenses. The three-month increase in sales and marketing expenses was primarily attributable to an increase of \$1.7 million in non-personnel cost, which included \$0.5 million intangible amortization related to our acquisition of Vayant, an increase of \$0.4 million in travel expenses, \$0.4 million in recruiting expenses, \$0.3 million for sales and marketing events, and \$0.1 million for facility and other overhead expense. The remaining increase was in personnel cost mainly attributable to an increase of \$1.8 million in noncash share-based compensation expense, partially offset by a decrease of \$1.2 million in severance expense related to the change in employment status of our former Chief Operating Officer in July 2016, an increase of \$0.6 million in commissions and \$0.4 increase in other personnel costs.

The nine-month increase in sales and marketing expense was primarily attributable to an increase of \$2.4 million in non-personnel cost, which included an increase of \$0.8 million for sales and marketing events, \$0.6 million in travel expenses, \$0.5 million in recruiting expenses and \$0.5 million intangible amortization related to our acquisition. The remaining increase of \$0.5 million was attributable to a \$1.7 million increase in personnel cost partially offset by a decrease of \$1.2 million in severance expense associated with the change in employment status of our former Chief Operating Officer in July 2016.

General and administrative expenses. The three-month increase in general and administrative expenses was primarily attributable to an increase of \$0.9 million in personnel cost mainly driven by \$0.6 million in noncash share-based compensation expense and \$0.2 million related to our acquisition. The remaining increase of \$0.2 million was attributable to facility and other overhead expenses.

The nine-month increase in general and administrative expenses was primarily attributable to an increase of \$2.2 million in noncash share-based compensation expense and \$0.8 million in other personnel costs as a result of an increase in headcount, which also included \$0.2 million related to our acquisition of Vayant. This increase was partially offset by a \$0.6 million decrease in legal, facility and other overhead expenses.

Research and development expenses. The three and nine-month increase in research and development expenses was primarily attributable to an increase of \$1.1 million and \$3.1 million, respectively, in personnel cost as a result of an increase in headcount to support our current and future product development and growth objectives, which also included \$0.4 million related to our acquisition of Vayant. This increase was partially offset by an increase in our capitalized internal-use software development costs of \$0.2 million and \$1.3 million, respectively. The remaining increase in research and development expenses of \$0.2 million and \$1.2 million, respectively, was attributable to non-personnel costs and related overhead expenses associated with higher personnel cost.

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Acquisition-related expenses. Acquisition-related expenses were \$0.6 million for the three and nine months ended September 30, 2017 consisting primarily of advisory and legal fees, accounting and other professional fees, and retention bonuses related to our acquisition and integration of Vayant.

Other expense, net:

	Three Months				Nine Months				
	Ended September 30, 2017		2016		Ended September 30, 2017		2016		
(Dollars in thousands)			\$	%			\$	%	
Convertible debt interest and amortization	\$	(4,094)	\$(2,339)	75	%	\$(9,078)	\$(6,943)	31	%
Other income (expense), net	\$	347	\$(26)	(1,435)	%	\$315	\$(139)	(327)	%

Convertible debt interest and amortization. The convertible debt expense for the three and nine months ended September 30, 2017 and 2016 related to coupon interest and amortization of debt discount and issuance costs attributable to our 2019 Notes issued in December 2014 and our 2047 Notes issued in June 2017.

Other income (expense) net. Other income (expense), net change by \$0.4 million and \$0.5 million for the three and nine months ended September 30, 2017, primarily due to foreign currency exchange rate fluctuations during the period.

Income tax (benefit) provision:

	Three Months				Nine Months						
	Ended September 30, 2017		2016		Ended September 30, 2017		2016				
(Dollars in thousands)			\$	%			\$	%			
Effective tax rate	1	%	(1)	%	n/a	n/a	—	%	(1)	%	
Income tax (benefit) provision	\$	(271)	\$227	\$(498)	(219)	%	\$55	\$490	\$(435)	(89)	%

Income tax (benefit) provision. The tax benefit of \$0.3 million and tax provision of \$0.1 million, respectively, for the three and nine months ended September 30, 2017 include foreign taxes and state taxes not based on pre-tax income. No tax benefit was recognized on jurisdictions with a projected loss for the year due to the valuation allowances on our deferred tax assets.

During the three months ended September 30, 2017, we acquired Vayant which reflected a net deferred tax liability position at acquisition. The additional deferred tax liability allowed us to release \$0.5 million of valuation allowance and reflect the deferred tax benefit of the release reducing the total tax expense in the three-month period. The total tax expense of \$0.1 million for the nine months ended September 30, 2017 includes foreign and state taxes not based on pre-tax income offset by the benefit recorded for the release of the valuation allowance.

Our effective tax rate was 1% and 0% the three and nine months ended September 30, 2017, respectively, and (1)% for both the three and nine months ended September 30, 2016. The income tax rate varies from the 34% federal statutory rate primarily due to the valuation allowances on our deferred tax assets and the limitation on deductibility of certain officers' compensation. While our expected tax rate would be 0% due to the full valuation on the deferred tax assets, the 1% tax rate for the three months ended September 30, 2017 and the (1)% tax rate for the three and nine months ended September 30, 2016 are due to foreign and state taxes not based on pre-tax income and the benefit recorded for the release of the valuation allowance during the three months ended September 30, 2017.

Jurisdictions with a projected loss for the year where no tax benefit can be recognized due to the valuation allowances on our deferred tax assets are excluded from the estimated annual federal effective tax rate. The impact of such an exclusion could result in a higher or lower effective tax rate during a particular quarter depending on the mix and timing of actual earnings versus annual projections.

#### Liquidity and Capital Resources

At September 30, 2017, we had \$157.4 million of cash and cash equivalents and \$105.8 million of working capital as compared to \$118.0 million of cash and cash equivalents and \$76.9 million of working capital at December 31, 2016. We had zero and \$16.0 million of short-term investments as of September 30, 2017 and December 31, 2016, respectively.

Our principal sources of liquidity are our cash and cash equivalents, short-term investments, cash flows generated from operations and potential borrowings under our secured Credit Agreement (the "Revolver") with the lenders party thereto and Wells

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Fargo Bank, National Association as agent for the lenders party thereto. In December 2014, we issued the 2019 Notes and in June 2017, we issued the 2047 Notes to supplement our overall liquidity position. Our material drivers or variants of operating cash flow are net income (loss), noncash expenses (principally share-based compensation, intangible amortization and amortization of debt discount and issuance costs) and the timing of periodic invoicing and cash collections related to licenses, subscriptions and support for our software and related services. The primary source of operating cash flows is the collection of accounts receivable from our customers. Our operating cash flows are also impacted by the timing of payments to our vendors and the payments of our other liabilities. We generally pay our vendors and service providers in accordance with the invoice terms and conditions.

We believe our existing cash, cash equivalents and short-term investments balances, including funds provided by the issuance of our Notes, funds available under our Revolver and our current estimates of future operating cash flows, will provide adequate liquidity and capital resources to meet our operational requirements, anticipated capital expenditures and coupon payments for our Notes for the next twelve months. Our future working capital requirements will depend on many factors, including the operations of our existing business, potential growth of our subscription services, future acquisitions we might undertake, and expansion into complementary businesses. If such need arises, we may raise additional funds through equity or debt financings.

The following table presents key components of our unaudited condensed consolidated statements of cash flows for the nine months ended September 30, 2017 and 2016:

(Dollars in thousands)	Nine Months Ended	
	September 30,	
	2017	2016
Net cash used in operating activities	\$(29,848 )	\$(7,159 )
Net cash used in investing activities	(21,444 )	(55,527 )
Net cash provided by (used in) financing activities	91,161	(3,930 )
Cash and cash equivalents (beginning of period)	118,039	161,770
Cash and cash equivalents (end of period)	\$157,359	\$95,208

Net cash used in operating activities. The \$22.7 million increase in net cash used in operating activities was primarily due to the net impact of working capital changes, mainly driven by a decrease in operating cash provided by accounts receivable of approximately \$13.0 million as a result of \$12.9 million of cash generated in the nine months ended September 30, 2016 due to improved collections. In addition, operating cash outflow was impacted by an increase in our prepaid assets for payments for cloud infrastructure and a decrease in accrued payroll and other employee benefits due to an increase in the annual incentive paid in the first quarter of 2017 over the amount paid in the first quarter of 2016.

Net cash used in investing activities. The \$34.1 million decrease in net cash used in investing activities was primarily due to \$64.4 million related to the timing of purchases and maturities of short-term investments, partially offset by the consideration of \$34.1 million paid for the acquisition of Vayant and payment of \$0.1 million for non-acquisition related intangible assets. In addition, capital expenditures decreased by \$5.3 million and capitalized internal-use software increased by \$1.4 million in the nine months ended September 30, 2017 as compared to the same period in 2016.

Net cash provided by (used in) financing activities. The increase of \$95.1 million in net cash provided by financing activities primarily consisted of the proceeds from the issuance of our 2047 Notes of \$93.5 million, higher proceeds from the exercise of stock options and employee stock plans, \$5.9 million and \$0.4 million, respectively, partially offset by payment of \$2.7 million of debt issuance cost on our 2047 Notes, an increase of \$2.0 million in tax withholdings on vesting of employee share-based awards and payment of \$0.2 million in debt issuance costs on the

Revolver renewal.

#### Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that are material. We do not have any relationships with unconsolidated entities or financial partnerships, such as variable interest entities, that would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

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Contractual Obligations and Commitments

Other than the changes described in Note 7, there have been no material changes to our contractual obligations and commitments disclosed in our Annual Report.

Credit facility

In July 2012, we entered into the Revolver. In January 2017, we extended the maturity date of the Revolver through July 2022. There were no outstanding borrowings under the Revolver as of September 30, 2017. As of September 30, 2017, we had \$0.2 million of unamortized debt issuance costs related to the Revolver included in prepaids and other current assets and other long-term assets in the unaudited condensed consolidated balance sheets. For the three and nine months ended September 30, 2017 and 2016, we recorded an immaterial amount of amortization of debt issuance cost which is included in other expense, net in the unaudited condensed consolidated statements of comprehensive income (loss).

Recent Accounting Pronouncements

See Note 2, “Recent Accounting Pronouncements” of Notes to Unaudited Condensed Consolidated Financial Statements of this Form 10-Q for discussion of recent accounting pronouncements including the respective expected dates of adoption.

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ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Foreign Currency Exchange Risk

Our contracts are predominately denominated in U.S. dollars. We are exposed to foreign currency exchange risk because we also have contracts denominated in foreign currencies. The effect of a hypothetical 10% adverse change in exchange rates on our foreign denominated receivables as of September 30, 2017 would result in a loss of approximately \$0.2 million. We are also exposed to foreign currency risk due to our French subsidiary, PROS France. A hypothetical 10% adverse change in the value of the U.S. dollar in relation to the Euro, which is the Company's single most significant foreign currency exposure, would have changed revenue for the three and nine months ended September 30, 2017 by approximately \$0.3 million and \$0.7 million, respectively. In addition, we have operating subsidiaries in the United Kingdom, Canada, Germany, Ireland, Australia, Bulgaria and United Arab Emirates. However, due to the relatively low volume of payments made and received by the Company through our foreign subsidiaries, we do not believe that we have significant exposure to foreign currency exchange risks. Fluctuations in foreign currency exchange rates could harm our financial results in the future.

We currently do not use derivative financial instruments to mitigate foreign currency exchange risks. We continue to review this matter and may consider hedging certain foreign exchange risks through the use of currency futures or options in future years.

Interest Rate Risk

The Company is exposed to market risk for changes in interest rates related to the variable interest rate on borrowings under the Revolver. As of September 30, 2017, the Company had no borrowings under the Revolver.

Our investment portfolio mainly consists of short-term interest-bearing obligations, including government and investment grade debt securities and money market funds. These securities are classified as available-for-sale and, consequently, are recorded in the unaudited condensed consolidated balance sheets at fair value with unrealized gains or losses reported as a separate component of accumulated other comprehensive income (loss), net of tax. Our investment strategy is focused on the preservation of capital and supporting our working capital requirements. We do not enter into investments for trading or speculative purposes. We believe that we do not have any material exposure to changes in the fair value as a result of changes in interest rates due to the short term nature of our cash equivalents.

As of September 30, 2017, we had outstanding principal amount of \$143.8 million and \$106.3 million, respectively, of 2019 Notes and 2047 Notes, which are fixed rate instruments. Therefore, our results of operations are not subject to fluctuations in interest rates. The fair value of the Notes may change when the market price of our stock fluctuates.

ITEM 4. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures as defined in Rules 13a-15(e) or 15d-15(e) under the Exchange Act of 1934, as amended (the "Exchange Act") as of September 30, 2017. Based on our evaluation of our disclosure controls and procedures as of September 30, 2017, our chief executive officer and chief financial officer concluded that our disclosure controls and procedures were effective to ensure that information we are required to disclose in reports that we file or submit under the Exchange Act (i) is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and (ii) is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding

required disclosure.

#### Changes in Internal Control over Financial Reporting

In August 2017, we acquired Vayant Travel Technologies, Inc. in an all-cash transaction. See Note 3, "Business Combinations" to the unaudited interim consolidated financial statements included in this Quarterly Report on Form 10-Q for a discussion of this acquisition and related financial data. Management has considered this acquisition material to the results of operations, cash flows and financial position from the date of the acquisition through September 30, 2017. In accordance with SEC guidance, management plans to exclude Vayant Travel Technologies, Inc. from management's assessment of, and report on, internal controls over financial reporting from the date of the acquisition through December 31, 2017. We are in the process of reviewing the operations of Vayant Travel Technologies, Inc. and evaluating the impact of the acquisition on our internal controls over financial reporting. Excluding this acquisition, there have been no changes in our internal control over financial reporting

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during the three months ended September 30, 2017 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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## PART II. OTHER INFORMATION

## ITEM 1. LEGAL PROCEEDINGS

From time to time, we are a party to legal proceedings and claims arising in the ordinary course of business. We are not currently aware of any such proceedings or claims that we believe will have, individually or in the aggregate, a material adverse effect on our business, financial condition, results of operations or cash flows.

## ITEM 1A. RISK FACTORS

There have been no material changes to the risk factors as presented in our Annual Report on Form 10-K for the year ended December 31, 2016, as updated in our Quarterly Report on Form 10-Q for the quarter ended June 30, 2017.

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

We have an ongoing authorization from our Board of Directors to repurchase up to \$15.0 million in shares of our common stock in the open market or through privately negotiated transactions. As of September 30, 2017, \$10.0 million remained available for repurchase under the existing repurchase authorization. We did not make any purchases of our common stock under this program for the three months ended September 30, 2017.

## ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

## ITEM 4. MINE SAFETY DISCLOSURE

None.

## ITEM 5. OTHER INFORMATION

None.

## ITEM 6. EXHIBITS

Index to Exhibits

Exhibit No.	Description	Provided Incorporated by Reference		
		Herewith	Form	SEC File No. Filing Date
10.1	<u>Agreement and Plan of Merger, dated August 3, 2017, by and among the Company, Wisdom U.S. Merger Sub Corporation, Vayant Travel Technologies, Inc. and NEVEQ Capital Partners, as agent for Target's securityholders thereunder.</u>		8-K	333-141884 8/3/2017
31.1	<u>Certification of Chief Executive Officer Pursuant to Exchange Act Rule 13a-14(a)/15d-14(a).</u>	X		
31.2	<u>Certification of Chief Financial Officer Pursuant to Exchange Act Rule 13a-14(a)/ 15d-14(a).</u>	X		
32.1*		X		

Certifications of Chief Executive Officer and Chief Financial  
Officer Pursuant to 18 U.S.C. Section 1350.

Exhibit No.	Description
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.

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\* This certification shall not be deemed “filed” for purposes of Section 18 of the Securities Act of 1934, or otherwise subject to the liability of that Section, nor shall it be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.

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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.

PROS HOLDINGS, INC.

October 26, 2017 By: /s/ Andres Reiner  
Andres Reiner  
President and Chief Executive Officer  
(Principal Executive Officer)

October 26, 2017 By: /s/ Stefan Schulz  
Stefan Schulz  
Executive Vice President and Chief Financial Officer  
(Principal Financial and Accounting Officer)