



PTC PREPARED REMARKS
FOURTH QUARTER AND FULL YEAR FISCAL 2017
OCTOBER 25, 2017

Please refer to the "Important Disclosures" section of these prepared remarks for important information about our operating metrics (including Subscription ACV, License and Subscription Bookings, and Subscription % of Bookings), GAAP and non-GAAP definitions, and other important disclosures. Additional financial information is provided in the PTC Financial Data Tables posted with these prepared remarks to PTC's Investor Relations website at investor.ptc.com.

Any reference to "total recurring software revenue" or "recurring software revenue" means the sum of subscription revenue and support revenue. Any reference to "total software revenue" or "software revenue" means the sum of subscription revenue, support revenue and perpetual license revenue. "Subscription revenue" includes cloud services revenue.

Q4'17 Results vs. July 19, 2017 Guidance

Operating Measures	Guidance		Results
In millions	Q4'17 Low	Q4'17 High	Actual
Subscription ACV	\$41	\$44	\$52
License and Subscription Bookings	\$120	\$130	\$144
Subscription % of Bookings	68%	68%	72%

Financial Measures	GAAP Guidance		GAAP Results	Non-GAAP Guidance		Non-GAAP Results	Non-GAAP at Guidance Mix ⁽¹⁾
	Q4'17 Low	Q4'17 High		Q4'17 Low	Q4'17 High		
In millions, except per share amounts							
Subscription Revenue	\$84	\$86	\$84	\$84	\$86	\$84	\$84
Support Revenue	\$138	\$138	\$141	\$138	\$138	\$141	\$141
Perpetual License Revenue	\$38	\$41	\$39	\$38	\$41	\$39	\$45
Software Revenue	\$260	\$265	\$265	\$260	\$265	\$265	\$271
Professional Services Revenue	\$43	\$43	\$42	\$43	\$43	\$42	\$42
Total Revenue	\$303	\$308	\$306	\$303	\$308	\$307	\$313
Operating Expense	\$195	\$198	\$206	\$173	\$176	\$181	\$180
Operating Margin	8%	9%	6%	18%	19%	18%	19%
Tax Rate	0%	0%	(220%)	10%	8%	6%	6%
EPS	\$0.09	\$0.14	\$0.15	\$0.33	\$0.38	\$0.34	\$0.39

⁽¹⁾ Operating measure that adjusts Non-GAAP results to guidance mix of 68% vs. actual Q4'17 mix of 72% and includes other adjustments as described in "Important Disclosures" set forth below.

Key Highlights of Operating Measures

In millions	Q4'17	YoY	YoY CC	FY'17	YoY	YoY CC	Management Comments
License and Subscription Bookings	\$144	1%	(1%)	\$419	4%	4%	<ul style="list-style-type: none"> Q4'17 bookings of \$144M were well above the high end of our guidance range of \$120M-\$130M, due to broad-based strength across our product portfolio, strong regional performance in Europe and the Americas (excluding the \$20M booking from a mega-deal in Q4'16), and sequential improvement in Japan. Excluding the \$20M booking from a mega-deal in Q4'16, Q4'17 bookings were up 18% YoY (16% in CC) and FY'17 bookings were up 10% YoY both as reported and in CC. For the full year, CAD bookings grew 14%, far outpacing market growth. This was the second consecutive year of double-digit, constant currency CAD bookings growth. PLM grew 6%, in line with the market, and our IoT business grew above the market growth rate of 30-40%.
Subscription ACV	\$52	4%	2%	\$143	25%	25%	<ul style="list-style-type: none"> Q4'17 new Subscription ACV of \$52M was above the high end of our guidance range of \$41M-\$44M. FY'17 ACV grew 25% YoY on strong bookings and continued adoption of our subscription offerings around the globe.
Subscription % of Bookings	72%	3%	3%	69%	22%	22%	<ul style="list-style-type: none"> Q4'17 subscription mix of 72% was above our guidance of 68% and was the highest quarterly mix posted to date. FY'17 subscription mix of 69% increased 13 percentage points from 56% in FY'16 (15 percentage points excluding the \$20M booking from a mega-deal in Q4'16). As previously announced, we plan to discontinue new perpetual license sales in the Americas and Western Europe as of January 1, 2018.



Key Highlights of Quarterly Financial Measures

In millions, except per share amounts	Q4'17	YoY	YoY CC	FY'17	YoY	YoY CC	Management Comments
Software Revenue: GAAP Non-GAAP	\$265	10%	9%	\$987	5%	5%	<ul style="list-style-type: none"> Software revenue grew 10% YoY in Q4'17 and 5% YoY for FY'17 as we exited the subscription trough, due to the success of our subscription transition program, coupled with strong new bookings performance in both FY'16 and FY'17.
	\$265	10%	9%	\$989	5%	5%	
Total Revenue: GAAP Non-GAAP	\$306	6%	5%	\$1,164	2%	2%	<ul style="list-style-type: none"> Total revenue grew 6% YoY in Q4 and 2% YoY for FY'17, which trailed software revenue growth due to our strategy of further leveraging our services partner ecosystem, which led to a 10% decline in professional services revenue for FY'17.
	\$307	6%	5%	\$1,167	2%	2%	
EPS: GAAP Non-GAAP	\$0.15	160%	173%	\$0.05	111%	105%	<ul style="list-style-type: none"> GAAP EPS improved by \$0.40 YoY in Q4 and \$0.53 for the full year largely due to lower restructuring costs and disciplined expense management, despite a higher mix of subscription bookings in FY'17 vs. FY'16. Non-GAAP EPS improved by \$0.14 YoY in Q4 and declined \$0.02 for the full year. Full year EPS was negatively impacted by a higher mix of subscription bookings in FY'17 vs. FY'16 and a less favorable tax rate.
	\$0.34	71%	62%	\$1.17	(2%)	(4%)	



Software Revenue Performance by Group
All references are to GAAP revenue, unless otherwise noted

In millions	Q4'17	YoY	YoY CC	FY'17	YoY	YoY CC	Management Comments
Solutions Software Revenue	\$239	10%	8%	\$894	3%	3%	<ul style="list-style-type: none"> Q4'17 Solutions software revenue growth was driven by strong bookings contributions from CAD, PLM and our global channel, which grew bookings in the high-teens. Higher subscription mix partially offset the strong bookings performance. Quarterly software revenue growth of 10% in Q4'17 was the first double-digit growth quarter since Q3'14, prior to our move to a subscription model. Full-year FY'17 Solutions software revenue returned to growth, evidencing our exit from the subscription trough, as the subscription model transition accelerated.
IoT Software Revenue	\$25	17%	17%	\$94	29%	29%	<ul style="list-style-type: none"> IoT Software revenue growth was driven by continued adoption of our IoT solutions, with IoT bookings growing above estimated market rates of 30-40% for the fiscal year, partially offset by higher subscription mix.

Software Revenue Performance by Region
All references are to GAAP revenue, unless otherwise noted

In millions	Q4'17	YoY	YoY CC	FY'17	YoY	YoY CC	Management Comments
Americas Software Revenue	\$112	9%	9%	\$434	5%	4%	<ul style="list-style-type: none"> Americas delivered solid software revenue growth in FY'17 due to strong bookings growth of 15% YoY for the full year, excluding the \$20M Q4'16 SLM booking from a mega-deal, offset by a higher subscription mix.
Europe Software Revenue	\$100	16%	13%	\$357	6%	7%	<ul style="list-style-type: none"> Europe delivered double-digit software revenue growth in Q4'17 and solid results for FY'17 due to very strong bookings growth of 28% in CC for the full year, offset by higher subscription mix.
APAC Software Revenue	\$52	4%	3%	\$197	2%	0%	<ul style="list-style-type: none"> APAC software revenue grew modestly YoY for the quarter and was flat YoY in CC despite a difficult bookings year, which was negatively impacted by sales execution challenges in Japan. While Japan's bookings performance rebounded in Q4'17, growing 80% sequentially to just under \$8 million, APAC bookings were down 16% for the year in CC.

Operating Performance

In millions	Q4'17	FY'17	Management Comments
<u>Professional Services</u> <u>Gross Margin:</u> GAAP Non-GAAP	 14% 18%	 15% 18%	<ul style="list-style-type: none"> Our professional services business continues to deliver gross margins in-line with our expectations as we continue to execute on our plan to achieve our target margin of 20%, which we expect to achieve in FY'18.
<u>Operating Expense:</u> GAAP Non-GAAP	 \$206 \$181	 \$794 \$688	<ul style="list-style-type: none"> Operating expenses were slightly above the high end of our guidance range due primarily to higher commissions incurred from the significant bookings outperformance.
<u>Operating Margin:</u> GAAP Non-GAAP	 6% 18%	 4% 16%	<ul style="list-style-type: none"> Both GAAP and non-GAAP operating margin improved year-over-year, despite a higher subscription mix than last year, both for the quarter (72% vs. 70%) and the fiscal year (69% vs. 56%), evidencing the positive impact of our exit from the subscription trough.
<u>Tax Rate:</u> GAAP Non-GAAP	 (220%) 6%	 544% 7%	<ul style="list-style-type: none"> Our tax rate includes a benefit of \$8.2 million related to a release of a valuation allowance in a foreign jurisdiction.



Other Highlights in Quarterly and Annual Operating Performance

- In Q4'17, subscription bookings represented 72% of total bookings, 4 percentage points higher than our guidance of 68% and 2 percentage points higher than our Q4'16 bookings mix of 70%. For FY'17, subscription bookings represented 69% of total bookings, 13 percentage points higher than our FY'16 bookings mix of 56% (15 percentage points higher than our FY'16 bookings mix excluding the \$20M booking from a mega-deal in Q4'16). Programs promoting the benefits of subscription as well as our support conversion program are driving our ongoing success in our transition to a subscription business model.
- For Q4'17, annualized recurring revenue (ARR) was approximately \$905 million, which grew 12% or \$98 million year-over-year and grew 5% or \$40 million sequentially. Due to our calculation methodology, quarterly variability in this metric should be expected, primarily due to the linearity of support billings during the year and the percentage of on-time renewals, the amount of support win-backs in a quarter, and whether the win-backs are traditional support, with immediate revenue recognition of the past-due amount, or a conversion to subscription, where all revenue is recognized over the future period. Multiple other contractual factors including ramping of committed monthly payments and other elements that may be sold with the subscription or support contract can impact the timing of revenue and calculated ARR.
- Total Deferred Revenue consists of Billed Deferred Revenue and Unbilled Deferred Revenue. Billed Deferred Revenue primarily relates to software agreements invoiced to customers for which the revenue has not yet been recognized. Unbilled Deferred Revenue is contractually committed orders for license, subscription and support with a customer for which the customer has not been invoiced and the associated revenue has not been recognized. We do not invoice prior to the contractual subscription start date. We do not record Unbilled Deferred Revenue on our Consolidated Balance Sheet until we invoice the customer. In Q4'17, Total Deferred Revenue grew 40% year-over-year and 20% sequentially. Billed Deferred Revenue grew 11% year-over-year, and declined 1% sequentially, due to lower scheduled support billings in the fourth quarter vs. the third quarter. Note that Q1'18 ends on December 30th this year, as opposed to December 31st last year, and January 2nd in fiscal '16. As a result, Q1'18 will have one less day of billings than Q1'17, and given the amount of billings scheduled for December 31st, this will negatively impact year-over-year growth of Billed Deferred Revenue by approximately 200 basis points. Also, since January 1st and 2nd billings will not be in Q1, like last year, we expect Billed Deferred Revenue to decline sequentially in Q1'18 from Q4'17.
- Unbilled Deferred Revenue grew 72% year-over-year and 43% sequentially due to the high volume of new Q4'17 subscription bookings with a billing and subscription start date of October 1, 2017 or later (which are booked in the quarter when the order is received if the start date is less than 100 days from the end of the quarter) and a large number of subscription renewals, with billing renewal dates of October 1, 2017 or later (in accordance with the 100 day booking rule), as well as the second or third year billing of multi-year subscription contracts. Note that the increase in unbilled deferred revenue is not due to a longer average contract duration, which remained at approximately 2 years for new subscription contracts. Also please note that we believe that Total Deferred Revenue is the most relevant indicator, as billed deferred revenue fluctuates throughout the year based upon the seasonality of our recurring revenue billings and the timing of our fiscal quarter ends.

(in millions)	Q4'17 9/30/17	Q3'17 7/1/17	Q4'16 9/30/16	Q/Q % Change	Y/Y % Change
Billed Deferred Revenue	\$459	\$465	\$414	(1%)	11%
Unbilled Deferred Revenue	\$633	\$443	\$369	43%	72%
Total Deferred Revenue	\$1,092	\$909	\$783	20%	40%

Note: Totals may not sum due to rounding



- In keeping with our strategy to grow our professional services partner ecosystem, Q4'17 service partner bookings grew approximately 76% YoY, with strong bookings growth among our large system integrator partners.
- For Q4'17, approximately 85% of GAAP and non-GAAP software revenue came from recurring revenue streams, up from 83% in Q4'16. For FY'17, approximately 86% of GAAP and 87% of non-GAAP software revenue came from recurring revenue streams, up from 82% in FY'16
- For Q4'17, cash flow provided by operating activities was \$33 million, and free cash flow was \$26 million, both of which include restructuring payments of approximately \$2 million, which we exclude from our Adjusted Free Cash Flow operating metric. For FY'17, cash flow provided by operating activities was \$135 million, and free cash flow was \$109 million, both of which include restructuring payments of approximately \$37 million and legal payments of approximately \$3 million. For the year, Adjusted Free Cash Flow was \$149 million, slightly below our guidance, due to planned Q4 collections that slipped into the beginning of October. Please note that our collections in the first three weeks of October totaled \$44 million.
- Cash, cash equivalents, and marketable securities totaled \$330 million as of September 30, 2017.
- As of September 30, 2017, gross borrowings totaled \$718 million, including \$500 million of senior notes and \$218 million outstanding under our revolving credit facility. Under our revolving credit facility, our leverage covenant is limited to 4.5 times adjusted EBITDA. Further, if our leverage covenant ratio exceeds 3.25 times adjusted EBITDA, our stock repurchases are limited to \$50 million in a year plus a \$100 million aggregate basket through June 30, 2018. Our leverage ratio at the end of Q4'17 was 2.82. As of September 30, 2017, we had approximately \$370 million available to borrow under the credit facility.
- We repurchased \$16 million worth of shares in Q4'17, which represents approximately 61% of our free cash flow in the quarter. Over the second half of the fiscal year, following the resumption of our share repurchase program, we repurchased \$51 million worth of shares, representing approximately 47% of free cash flow for the full fiscal year.

Net Reporting of Deferred Revenue Changes

PTC has historically reported the impact of deferred revenue changes on cash flow from operations using a “net” method. Under this “net” method, the change in deferred revenue is presented net of the change in uncollected receivables related to such deferred revenues. Particularly in quarters where we have significant billings at or near the end of a quarter (like January 1 or April 1), this presentation provides a more accurate reflection of the cash flows in the period. Under the “gross” method (illustrated on the right-side of the table below), the total change in deferred revenue on the balance sheet is presented (\$6 million, plus a \$4 million impact related to changes in foreign currency exchange rates), offset by a change in other current assets of \$30 million. Cash flow from operating activities is the same in both cases.

(in millions)	As Reported (Net) Q4'17 9/30/17	Pro Forma (Gross) Q4'17 9/30/17
Cash flows from operating activities:		
Net income	\$17	\$17
Stock-based comp and D&A	43	43
Accounts receivable	(22)	(22)
Deferred revenue	(40)	(10)
Other	35	5
Net cash provided by operating activities	\$33	\$33



Q1'18 and FY'18 Guidance

Our Q1'18 and FY'18 guidance includes the following general considerations:

- We will be discontinuing new perpetual license sales in the Americas and Western Europe as of January 1, 2018, except for Kepware.
- A higher mix of subscription bookings is expected to benefit us over the long term, but results in lower revenue and lower earnings in the near term.
- It can be challenging to forecast the rate of customer adoption of the subscription offering in certain geographies and therefore the overall impact to near-term reported financial results.
- Global macroeconomic conditions appear to have mostly stabilized and no longer appear to be a headwind to our performance, particularly in the industrial sector, creating an improving backdrop in the more mature CAD and PLM markets, which tend to be more cyclical. These more favorable economic conditions have been factored into our guidance.
- While our performance in Japan improved in Q4, we still have work to do, so we have been cautious about our performance expectation for Japan in FY'18. In fact, while we are assuming some growth vs. FY'17, our internal plan calls for much lower bookings than in FY'14, FY'15 or FY'16.
- Our Fx assumptions in our guidance approximate current rates.

Q1'18 and FY'18 Operating Guidance

In millions	Q1'18 Low	Q1'18 High	FY'18 Low	FY'18 High	Management Comments
Subscription ACV	\$28	\$31	\$178	\$185	<ul style="list-style-type: none"> • At the midpoint, FY'18 guidance is up approximately 27% YoY based on continued adoption of our subscription offerings and the discontinuation of new perpetual license sales in the Americas and Western Europe effective January 1, 2018. • At the midpoint, Q1 guidance is up approximately 1% YoY. Last year Q1 included a \$6M ACV mega deal, and Q4'17 benefited from a \$3M+ ACV deal that closed early at the end of Q4 rather than in Q1'18 as expected. This conversion deal is effective January 1, 2018. The timing of these 2 large deals negatively impacts Q1'18 ACV growth.
License and Subscription Bookings	\$82	\$92	\$446	\$464	<ul style="list-style-type: none"> • At the midpoint, FY'18 guidance is up approximately 9% YoY and is up 11% YoY at the high end. When factoring in the \$7M conversion mega-deal that closed early at the end of Q4'17 rather than in Q1'18, the midpoint of guidance would be up approximately 12% YoY and the high-end would have increased 14% YoY. • At the midpoint, Q1 guidance is down approximately 3% YoY. Last year Q1 included a \$12M mega deal, and Q4'17 benefited from a \$7M conversion deal that closed early at the end of Q4 rather than in Q1'18, as expected. This conversion is effective January 1, 2018. The timing of these 2 large deals negatively impacts Q1'18 bookings growth. Excluding these 2 large transaction, Q1 guidance is consistent with historical quarterly patterns.
Subscription % of Bookings	68%	68%	80%	80%	<ul style="list-style-type: none"> • For FY'18, we expect 80% of our bookings to be subscription vs. 69% in FY'17, with subscription mix exiting the year at 85% in Q4'18. The full-year FY'18 subscription mix guidance of 80% mix is modestly below our prior target, reflecting a more cautious view of Japan performance as we continue to recover from execution challenges. However, this modest reduction in the full year mix does not impact our long-term model, due to our over-performance in FY'16 and '17 in ACV and our ending FY'17 ARR. • For Q1, we expect 68% of our bookings to be subscription, based on our current view of the pipeline.



Q1'18 and FY'18 Financial Guidance

In millions	Q1'18 Low	Q1'18 High	FY'18 Low	FY'18 High	Management Comments
Subscription Revenue	\$98	\$100	\$440	\$450	<ul style="list-style-type: none"> At the midpoints, FY'18 is up approximately 58% YoY and Q1 guidance is up approximately 80% YoY based on the continued success of our subscription transition and conversion programs. Note our FY'18 subscription revenue guidance exceeds our subscription bookings guidance by more than 20% for the first time in our transition, illustrating the compounding benefit of a subscription business model as it matures over time.
Support Revenue	\$132	\$132	\$525	\$525	<ul style="list-style-type: none"> At the midpoints, FY'18 is down approximately 9% YoY and Q1 guidance is down approximately 13% YoY as fewer customers purchase perpetual licenses and support in favor of our subscription offering, and more customers have converted their perpetual licenses to subscription.
Perpetual License Revenue	\$27	\$30	\$90	\$95	<ul style="list-style-type: none"> At the midpoints, FY'18 is down approximately 31% YoY and Q1 guidance is down approximately 19% YoY as an increasing proportion of our customers purchase software as a subscription. New perpetual licenses will no longer be available for sale in the Americas and Western Europe as of January 1, 2018, except for Kepware.
Software Revenue	\$257	\$262	\$1,055	\$1,070	<ul style="list-style-type: none"> We expect FY'18 software revenue growth of approximately 7%-8%, driven by strong subscription revenue growth, despite a higher anticipated mix of subscription than in the prior year (FY'18 guidance of 80% vs. FY'17 mix of 69%). We expect recurring software revenue growth of approximately 13-14%. We expect 91% of our software revenue will be recurring in FY'18. At the midpoint, Q1 guidance is up approximately 8% driven by the increase in subscription revenue as a result of the continued success of our subscription transition and conversion programs. We expect recurring software revenue growth of approximately 12%.
Professional Services Revenue	\$40	\$40	\$170	\$170	<ul style="list-style-type: none"> At the midpoints, FY'18 is down approximately 4% YoY and Q1 guidance is down approximately 14% YoY because of fewer large services engagements as we continue to emphasize more standard implementations of our products, continue to execute on our strategy of growing our service partner ecosystem, and focus on expanding our professional services gross margins.
Total Revenue	\$297	\$302	\$1,225	\$1,240	<ul style="list-style-type: none"> FY'18 is up approximately 5%-6% YoY and Q1 guidance is up approximately 3%-5% YoY on the continued success of our subscription transition and conversion programs, improved execution in our core business and growing momentum in the demand for our IoT solutions, offset by planned lower professional services revenue.



Q1'18 and FY'18 Financial Guidance, Continued

In millions	Q1'18 Low	Q1'18 High	FY'18 Low	FY'18 High	Management Comments
Operating Expense: GAAP Non-GAAP	\$199	\$202	\$814	\$824	<ul style="list-style-type: none"> FY18 non-GAAP operating expense is up 5% to 6.5%. Consistent with our long-term model, non-GAAP opex growth is targeted at about 50% of bookings growth. We estimate that Fx drove a 140 bps increase in opex. At the midpoints, FY'18 GAAP operating expense is up approximately 3% YoY and Q1'18 GAAP operating expense is approximately flat YoY.
Operating Margin: GAAP Non-GAAP	5%	7%	7%	7%	<ul style="list-style-type: none"> At the midpoints, FY'18 non-GAAP guidance is up approximately 140 bps YoY and Q1'18 non-GAAP guidance is up approximately 110 bps YoY, despite higher subscription mix guidance. At the midpoints, FY'18 GAAP guidance is up approximately 350 bps YoY and Q1'18 GAAP guidance is up approximately 440 bps YoY, despite higher subscription mix guidance.
Tax Rate: GAAP Non-GAAP	25%	25%	25%	25%	<ul style="list-style-type: none"> Both GAAP and non-GAAP guidance are based on current estimates.
Shares Outstanding: GAAP Non-GAAP	117	117	117	117	<ul style="list-style-type: none"> Both GAAP and non-GAAP guidance are based on current estimates.
EPS: GAAP Non-GAAP	\$0.03	\$0.05	\$0.24	\$0.30	<ul style="list-style-type: none"> At the midpoints, FY'18 non-GAAP guidance is up approximately \$0.15 or 13% YoY and Q1 non-GAAP guidance is up approximately \$0.04 or 13% YoY. At the midpoints, FY'18 GAAP guidance is up approximately \$0.22 or 440% YoY and Q1 GAAP guidance is an improvement of \$0.12 YoY. Due to continued execution and expense discipline, we expect EPS growth in FY'18 despite a higher mix of subscription bookings, Fx headwinds negatively impacting Opex and a less favorable tax rate than in FY'17.
Free Cash Flow			\$190	\$200	<ul style="list-style-type: none"> FCF guidance includes approximately \$40 million of capex in FY'18, up from \$25M in FY'17, primarily due to the buildout of our new headquarters. We expect capex to decline to historical levels when the buildout is complete, which we estimate to be in Q2 of FY'19.



The first quarter and full year FY'18 revenue, non-GAAP operating margin and non-GAAP EPS guidance exclude the estimated items outlined below, as well as any tax effects and discrete tax items that occur (which are not known nor reflected).

In millions	Q1'18	FY'18
Effect of acquisition accounting on fair value of acquired deferred revenue	\$ -	\$ 1
Stock-based compensation expense	17	70
Intangible asset amortization expense	15	58
Total Estimated GAAP adjustments	\$ 32	\$ 129

Long-Range Targets (Non-GAAP)

Based on our strong fiscal 2017 results and our positive outlook for fiscal 2018, we are reaffirming our prior fiscal 2021 financial targets, which call for:

- o \$1.8 billion in total revenue, growing double-digits; \$1.6 billion of software revenue, growing double-digits
- o 85% subscription mix, yielding 95% recurring software revenue
- o Operating margin in the low 30% range
- o EPS of \$4.15, and
- o Free cash flow of \$525 million
- o Given the compounding benefit of a subscription business model, we expect operating margin, EPS, and free cash flow growth will accelerate significantly beginning in fiscal '19, including between 400 to 600 basis points of annual operating margin expansion through fiscal '21.

Please note that these future targets do not take into consideration the impact of ASC 606, which PTC will adopt as of October 1, 2018 (fiscal year 2019). We have included a long term operating model presentation with our earnings documents posted to our investor relations website at investor.ptc.com.

Important Disclosures

Reporting metrics and non-GAAP definitions – Management believes certain operating measures and non-GAAP financial measures provide additional meaningful information that should be considered when assessing our performance. These measures should be considered in addition to, not as a substitute for, the reported GAAP results.

Software licensing model – A majority of our software sales historically were perpetual licenses, where customers own the software license. Typically, our customers choose to pay for ongoing support, which includes the right to software upgrades and technical support, and attach rates on support are in the high 90% range with retention rates also in the 90% range. For fiscal 2016 and fiscal 2017, a majority of our new license bookings have consisted of ratably recognized subscriptions. Under a subscription, customers pay a periodic fee for the continuing right to use our software, including access to technical support. They may also elect to use our cloud services and have us manage the application. We began offering subscription pricing as an option for most PTC products in Q1 FY'15, and earlier this year, we announced that beginning in January of 2018, we will no longer offer new perpetual licenses in the Americas and Western Europe, except for Kepware. We believe subscription has proved attractive to customers as it: (1) increases customer flexibility and opportunity to change their mix of licenses; (2) lowers the initial purchase commitment; and (3) allows customers to use operating rather than capital budgets. Over a four to five-year period we believe the value of a subscription is likely to exceed that of a perpetual license, assuming similar seat counts. However, initial revenue, operating margin, and EPS will be lower as revenue is recognized ratably in a subscription, rather than up front.



Bookings Metrics – We offer both perpetual and subscription licensing options to our customers, as well as monthly software rentals for certain products. Given the difference in revenue recognition between the sale of a perpetual software license (revenue is recognized at the time of sale) and a subscription (revenue is deferred and recognized ratably over the subscription term), we use bookings for internal planning, forecasting and reporting of new license and cloud services transactions. In order to normalize between perpetual and subscription licenses, we define subscription bookings as the subscription annualized contract value (subscription ACV) of new subscription bookings multiplied by a conversion factor of 2. We arrived at the conversion factor of 2 by considering a number of variables including pricing, support, length of term, and renewal rates. We define subscription ACV as the total value of a new subscription booking divided by the term of the contract (in days) multiplied by 365. If the term of the subscription contract is less than a year, the ACV is equal to the total contract value. Note that both in FY'16 as well as FY'17, the weighted average contract length of our subscription bookings was approximately 2 years.

License and subscription bookings equal subscription bookings (as described above) plus perpetual license bookings plus any monthly software rental bookings during the period. Total ACV equals subscription ACV (as described above) plus the annualized value of incremental monthly software rental bookings during the period.

Because subscription bookings is a metric we use to approximate the value of subscription sales if sold as perpetual licenses, it does not represent the actual revenue that will be recognized with respect to subscription sales or that would be recognized if the sales were perpetual licenses, nor does the annualized value of monthly software rental bookings represent the value of any such booking.

Annualized Recurring Revenue (ARR) - To help investors understand and assess the success of our subscription transition, we provide an Annualized Recurring Revenue operating measure. Annualized Recurring Revenue (ARR) for a given quarter is calculated by dividing the portion of non-GAAP software revenue attributable to subscription and support for the quarter by the number of days in the quarter and multiplying by 365. (A related metric is Subscription ARR, which is calculated by dividing the portion of non-GAAP revenue attributable to subscription for the quarter by the number of days in the quarter and multiplying by 365.) ARR should be viewed independently of revenue and deferred revenue as it is an operating measure and is not intended to be combined with or to replace either of those items. ARR is not a forecast of future revenue, which can be impacted by contract expiration and renewal rates, and does not include revenue reported as perpetual license or professional services revenue in our consolidated statement of income. Subscription and support revenue and ARR disclosed in a quarter can be impacted by multiple factors, including but not limited to (1) the timing of the start of a contract or a renewal, including the impact of on-time renewals, support win-backs, and support conversions, which may vary by quarter, (2) the ramping of committed monthly payments under a subscription agreement over time, and (3) multiple other contractual factors with the customer including other elements sold with the subscription or support contract. These factors can result in variability in disclosed ARR.

Non-GAAP Revenue – Excludes the fair value adjustment for acquired deferred revenue. In Q1'15, we began including cloud services revenue, which was formerly reported in services, in subscription revenue.

Navigate Allocation -- In FY'16, we launched Navigate, a ThingWorx-based IoT solution for PLM. In FY'17, revenue and bookings for Navigate are being allocated 50% to Solutions and 50% to IoT. FY'16 reported amounts have been reclassified to conform with the current presentation. The impact of the reclassification on FY'16 revenue was immaterial.

Foreign Currency Impacts on our Business – We have a global business, with Europe and Asia historically representing approximately 60% of our revenue, and fluctuation in foreign currency exchange rates can significantly impact our results. We do not forecast currency movements; rather we provide detailed constant currency commentary. We employ a hedging strategy to limit our exposure to currency risk.



Constant Currency Change Measure (YoY CC) – Year-over-year changes in revenue on a constant currency basis compare reported results excluding the effect of any hedging converted into U.S. dollars based on the corresponding prior year's foreign currency exchange rates to reported results for the comparable prior year period.

Important Information about Non-GAAP References

PTC provides non-GAAP supplemental information to its financial results. We use these non-GAAP measures, and we believe that they assist our investors, to make period-to-period comparisons of our operational performance because they provide a view of our operating results without items that are not, in our view, indicative of our core operating results. We believe that these non-GAAP measures help illustrate underlying trends in our business, and we use the measures to establish budgets and operational goals, communicated internally and externally, for managing our business and evaluating our performance. We believe that providing non-GAAP measures affords investors a view of our operating results that may be more easily compared to the results of peer companies. In addition, compensation of our executives is based in part on the performance of our business based on these non-GAAP measures. However, non-GAAP information should not be construed as an alternative to GAAP information as the items excluded from the non-GAAP measures often have a material impact on our financial results and such items often recur. Management uses, and investors should consider, non-GAAP measures in conjunction with our GAAP results.

Non-GAAP revenue, non-GAAP operating expense, non-GAAP operating margin, non-GAAP gross profit, non-GAAP gross margin, non-GAAP net income and non-GAAP EPS exclude the effect of the following items:

- *Fair value of acquired deferred revenue* is a purchase accounting adjustment recorded to reduce acquired deferred revenue to the fair value of the remaining obligation, so our GAAP revenue after an acquisition does not reflect the full amount of revenue that would have been reported if the acquired deferred revenue was not written down to fair value. We believe excluding these adjustments to revenue from these contracts (and associated costs in *fair value adjustment to deferred services cost*) is useful to investors as an additional means to assess revenue trends of our business.
- *Stock-based compensation* is a non-cash expense relating to stock-based awards issued to executive officers, employees and outside directors and to our employee stock purchase plan. We exclude this expense as it is a non-cash expense and we assess our internal operations excluding this expense and believe it facilitates comparisons to the performance of other companies in our industry.
- *Amortization of acquired intangible assets* is a non-cash expense that is impacted by the timing and magnitude of our acquisitions. We believe the assessment of our operations excluding these costs is relevant to our assessment of internal operations and comparisons to the performance of other companies in our industry.
- *Acquisition-related charges included in general and administrative costs* are direct costs of potential and completed acquisitions and expenses related to acquisition integration activities, including transaction fees, due diligence costs, severance and professional fees. In addition, subsequent adjustments to our initial estimated amount of contingent consideration associated with specific acquisitions are included within acquisition-related charges. These costs are not considered part of our normal operations as the occurrence and amount will vary depending on the timing and size of acquisitions.



- *U.S. pension plan termination-related costs* include charges related to our plan that we began terminating in the second quarter of 2014. Costs associated with the termination are not considered part of our regular operations.
- *Restructuring charges* include excess facility restructuring charges and severance costs resulting from reductions of personnel driven by modifications to our business strategy and not considered part of our normal operations. These costs may vary in size based on our restructuring plan.
- *Non-operating credit facility refinancing costs* are non-operating charges we record as a result of the refinancing of our credit facility. We assess our internal operations excluding these costs and believe it facilitates comparisons to the performance of other companies in our industry.
- *Income tax adjustments* include the tax impact of the items above and assumes that we are profitable on a non-GAAP basis in the U.S. and one foreign jurisdiction, and eliminates the effect of the valuation allowance recorded against our net deferred tax assets in those jurisdictions. Additionally, we exclude other material tax items that we view as non-ordinary course.

PTC also provides information on “free cash flow” and “adjusted free cash flow” to enable investors to assess our ability to generate cash without incurring additional external financings and to evaluate our performance against our announced long term goal of returning approximately 40% of our free cash flow to shareholders via stock repurchases. Free cash flow is net cash provided by (used in) operating activities less capital expenditures; adjusted free cash flow is free cash flow excluding restructuring payments and certain identified non-ordinary course payments. Free cash flow and adjusted free cash flow are not measures of cash available for discretionary expenditures.

Forward-Looking Statements

Statements in these prepared remarks that are not historic facts, including statements about our first quarter and full fiscal 2018 targets, our long-range targets for fiscal 2021, and other future financial and growth expectations and targets, and anticipated tax rates, are forward-looking statements that involve risks and uncertainties that could cause actual results to differ materially from those projected. These risks include: the macroeconomic and/or global manufacturing climates may not improve or may deteriorate; customers may not purchase our solutions when or at the rates we expect; our businesses, including our Internet of Things (IoT) business, may not expand and/or generate the revenue we expect; foreign currency exchange rates may vary from our expectations and thereby affect our reported revenue and expense; the mix of revenue between license & subscription solutions, support and professional services could be different than we expect, which could impact our EPS results; our customers may purchase more of our solutions as subscriptions than we expect, which would adversely affect near-term revenue, operating margins, and EPS; customers may not purchase subscriptions as we expect, which could impact our ability to achieve targeted subscription bookings and subscription mix; sales of our solutions as subscriptions may not have the longer-term effect on revenue and earnings that we expect; we may be unable to expand our partner ecosystem as we expect and our partners may not generate the revenue we expect; we may be unable to improve performance in Japan when or as we expect; we may be unable to generate sufficient operating cash flow to return 40% of free cash flow to shareholders and other uses of cash or our credit facility limits could preclude share repurchases; and any repatriation of cash held outside the U.S., which constitutes a significant portion of our cash, could be subject to significant taxes. In addition, our assumptions concerning our future GAAP and non-GAAP effective income tax rates are based on estimates and other factors that could change, including the geographic mix of our revenue, expenses and profits and loans and cash repatriations from foreign subsidiaries. Other risks and uncertainties that could cause actual results to differ materially from those projected are detailed from time to time in reports we file with the Securities and Exchange Commission, including our most recent Annual Report on Form 10-K and Quarterly Reports on Form 10-Q.



PTC Inc.

NON-GAAP FINANCIAL MEASURES AND RECONCILIATIONS (UNAUDITED)
(in thousands, except per share data)

	Three Months Ended		Twelve Months Ended	
	September 30, 2017	September 30, 2016	September 30, 2017	September 30, 2016
GAAP revenue	\$ 306,379	\$ 288,237	\$ 1,164,039	\$ 1,140,533
Fair value adjustment of acquired deferred subscription revenue	240	619	1,670	2,330
Fair value adjustment of acquired deferred services revenue	255	266	1,043	1,139
Non-GAAP revenue	<u>\$ 306,874</u>	<u>\$ 289,122</u>	<u>\$ 1,166,752</u>	<u>\$ 1,144,002</u>
GAAP gross margin	\$ 223,574	\$ 205,381	\$ 835,020	\$ 814,868
Fair value adjustment of acquired deferred revenue	495	885	2,713	3,469
Fair value adjustment to deferred services cost	(108)	(114)	(437)	(492)
Stock-based compensation	3,519	2,556	12,611	10,791
Amortization of acquired intangible assets included in cost of revenue	7,327	6,369	26,621	24,604
Non-GAAP gross margin	<u>\$ 234,807</u>	<u>\$ 215,077</u>	<u>\$ 876,528</u>	<u>\$ 853,240</u>
GAAP operating income (loss)	\$ 17,569	\$ (33,075)	\$ 40,898	\$ (37,014)
Fair value adjustment of acquired deferred revenue	495	885	2,713	3,469
Fair value adjustment to deferred services cost	(108)	(114)	(437)	(492)
Stock-based compensation	20,569	14,175	76,708	65,996
Amortization of acquired intangible assets included in cost of revenue	7,327	6,369	26,621	24,604
Amortization of acquired intangible assets	8,122	8,158	32,108	33,198
Acquisition-related charges included in general and administrative costs	600	281	1,587	3,496
US pension plan termination-related costs	-	-	285	-
Legal settlement accrual	-	3,199	-	3,199
Restructuring charges (credits), net	(358)	31,732	7,942	76,273
Non-GAAP operating income ⁽¹⁾	<u>\$ 54,216</u>	<u>\$ 31,610</u>	<u>\$ 188,425</u>	<u>\$ 172,729</u>
GAAP net income (loss)	\$ 17,435	\$ (28,473)	\$ 6,239	\$ (54,465)
Fair value adjustment of acquired deferred revenue	495	885	2,713	3,469
Fair value adjustment to deferred services cost	(108)	(114)	(437)	(492)
Stock-based compensation	20,569	14,175	76,708	65,996
Amortization of acquired intangible assets included in cost of revenue	7,327	6,369	26,621	24,604
Amortization of acquired intangible assets	8,122	8,158	32,108	33,198
Acquisition-related charges included in general and administrative costs	600	281	1,587	3,496
US pension plan termination-related costs	-	-	285	-
Legal settlement accrual	-	3,199	-	3,199
Restructuring charges (credits), net	(358)	31,732	7,942	76,273
Non-operating credit facility refinancing costs	-	-	1,152	2,359
Income tax adjustments ⁽²⁾	(14,546)	(13,328)	(17,357)	(19,809)
Non-GAAP net income	<u>\$ 39,536</u>	<u>\$ 22,884</u>	<u>\$ 137,561</u>	<u>\$ 137,828</u>
GAAP diluted earnings (loss) per share	\$ 0.15	\$ (0.25)	\$ 0.05	\$ (0.48)
Fair value adjustment of acquired deferred revenue	-	0.01	0.02	0.03
Stock-based compensation	0.18	0.12	0.65	0.57
Amortization of acquired intangibles	0.13	0.12	0.50	0.50
Acquisition-related charges	0.01	-	0.01	0.03
Legal settlement accrual	-	0.03	-	0.03
Restructuring charges (credits), net	-	0.27	0.07	0.66
Non-operating credit facility refinancing costs	-	-	0.01	0.02
Income tax adjustments	(0.12)	(0.11)	(0.15)	(0.17)
Non-GAAP diluted earnings per share	<u>\$ 0.34</u>	<u>\$ 0.20</u>	<u>\$ 1.17</u>	<u>\$ 1.19</u>
GAAP diluted weighted average shares outstanding	117,380	114,958	117,356	114,612
Dilutive effect of stock-based compensation plans	-	1,522	-	985
Non-GAAP diluted weighted average shares outstanding	<u>117,380</u>	<u>116,480</u>	<u>117,356</u>	<u>115,597</u>

(1) Operating margin impact of non-GAAP adjustments:

	Three Months Ended		Twelve Months Ended	
	September 30, 2017	September 30, 2016	September 30, 2017	September 30, 2016
GAAP operating margin	5.7%	-11.5%	3.5%	-3.2%
Fair value of acquired deferred revenue	0.2%	0.3%	0.2%	0.3%
Fair value adjustment to deferred services cost	0.0%	0.0%	0.0%	0.0%
Stock-based compensation	6.7%	4.9%	6.6%	5.8%
Amortization of acquired intangibles	5.0%	5.0%	5.0%	5.1%
Acquisition-related charges	0.2%	0.1%	0.1%	0.3%
US pension plan termination-related costs	0.0%	0.0%	0.0%	0.0%
Legal settlement accrual	0.0%	1.1%	0.0%	0.3%
Restructuring charges (credits), net	-0.1%	11.0%	0.7%	6.7%
Non-GAAP operating margin	<u>17.7%</u>	<u>10.9%</u>	<u>16.1%</u>	<u>15.1%</u>

(2) We have recorded a full valuation allowance against our U.S. net deferred tax assets and a valuation allowance against net deferred tax assets in certain foreign jurisdictions. As we are profitable on a non-GAAP basis, the 2017 and 2016 non-GAAP tax provisions are being calculated assuming there is no valuation allowance. Income tax adjustments reflect the tax effects of non-GAAP adjustments which are calculated by applying the applicable tax rate by jurisdiction to the non-GAAP adjustments listed above. Additionally, we recorded a tax benefit in 2016 for the write-off of a deferred tax liability that resulted from the change in tax status of a foreign subsidiary. This tax benefit has been excluded from non-GAAP tax expense.