PTC PREPARED REMARKS
SECOND QUARTER FISCAL 2018
APRIL 18, 2018

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.

Q2'18 Results vs. January 17, 2018 Guidance

Operating Measures	Guidance		Results
In millions	Q2'18 Low	Q2'18 High	Actual
Subscription ACV	$37	$41	**$38.5**
License and Subscription Bookings	$94	$104	**$99**
Subscription % of Bookings	79%	79%	**78%**

Financial Measures	GAAP Guidance		GAAP Results	Non-GAAP Guidance		Non-GAAP Results	Non-GAAP at Guidance Mix(1)
In millions, except per share amounts	Q2'18 Low	Q2'18 High		Q2'18 Low	Q2'18 High		
Subscription Revenue	$111	$113	**$113**	$111	$113	**$113**	**$113**
Support Revenue	$126	$126	**$127**	$126	$126	**$127**	**$127**
Recurring Software Revenue	**$237**	**$239**	**$240**	**$237**	**$239**	**$240**	**$240**
Perpetual License Revenue	$20	$23	**$23**	$20	$23	**$23**	**$22**
Software Revenue	**$257**	**$262**	**$262**	**$257**	**$262**	**$263**	**$262**
Professional Services Revenue	$43	$43	**$45**	$43	$43	**$46**	**$46**
Total Revenue	**$300**	**$305**	**$308**	**$300**	**$305**	**$308**	**$307**
Operating Expense	$202	$205	**$202**	$176	$179	**$179**	**$179**
Operating Margin	4%	6%	**7%**	16%	17%	**18%**	**17%**
Tax Rate	15%	15%	**31%**	11%	9%	**9%**	**9%**
EPS	$0.01	$0.04	**$0.07**	$0.28	$0.32	**$0.34**	**$0.33**

(1) Operating measure that adjusts Non-GAAP results to guidance mix of 79% vs. actual Q2'18 mix of 78% and includes other adjustments as described in "Important Disclosures" set forth below.

Key Highlights of Operating Measures

In millions	Q2'18	YoY	YoY CC	Q2 YTD	YTD	YTD CC	Management Comments
License and Subscription Bookings	**$99**	4%	(1%)	**$203**	10%	5%	• Q2'18 bookings of $99M were at the midpoint of our guidance range of $94 to $104M, despite a large deal forecasted in Q2 that closed in early Q3. Please note that the exact timing of larger deals can be a bit unpredictable. Had that deal closed in Q2, bookings would have been near the higher-end of guidance. • First half bookings grew 10% overall, 5% in constant currency and 9% constant currency when adjusting for the early close of the $7M mega-deal at the end of Q4'17. Recall that bookings grew 20% YoY for the first half of FY'17, so the first half of FY'18 presented a difficult comparison. • For the first half of the year, CAD bookings grew double-digits, far outpacing market growth rates and the outlook for the balance of the year remains very strong; PLM bookings are tracking at market growth rates after a very strong Q1 and an expected decline in Q2, due to the timing of large deals. SLM, which had been performing below expectations for a number of quarters, posted solid bookings results in Q2. At the start of the fiscal year, we reorganized the SLM team under new leadership, and early results appear promising. • IoT delivered another good quarter with strong contribution from customer expansions, accounting for about half of our ThingWorx bookings, and the number of six-figure deals grew approximately 45% YoY, driven by these expansions. IoT bookings growth for the first half of FY'18 is in line with the 30-40% estimated IoT market growth rate, when excluding the 8-figure mega deal from Q1'17. • Our global channel continues to exceed expectations, growing bookings double-digits for the ninth consecutive quarter. • Geographically, the Americas had a strong quarter, growing 19% YoY (7% YTD, against a difficult compare with 36% YTD growth a year ago); Europe declined 13% in the quarter as forecasted, primarily due to timing of large deals and a difficult compare, but is up 9% YTD, helped by Fx against a difficult compare of 26% CC YTD growth a year ago, and we forecast a strong Q3; and APAC is continuing a solid run, up 7% in the quarter and 15% YTD. Japan performed in line with our expectations.
Subscription ACV	**$38.5**	15%	9%	**$73**	16%	11%	• Q2'18 new subscription ACV of $38.5 million was within our guidance range of $37M to $41M. • If we had closed the large deal that slipped from Q2 to Q3, ACV would have been near the higher end of our guidance range.
Subscription % of Bookings	**78%**			**72%**			• Q2'18 subscription mix of 78% was one percentage point below our guidance of 79%, due to the timing of a large deal that slipped from Q2 to the beginning of Q3. • Subscription mix of 78% was up from 71% in the same period last year and up from 67% in Q1.

Key Highlights of Quarterly Financial Measures

In millions, except per share amounts	Q2'18	YoY	YoY CC	Management Comments
Software Revenue: **GAAP** **Non-GAAP**	**$262** **$263**	12% 12%	7% 7%	• Software revenue grew double-digits for the third consecutive quarter and was up 12% YoY despite a 700 basis point increase in subscription mix YoY. • Subscription revenue grew 72% YoY and recurring software revenue grew 15% YoY and has now grown double-digits for five consecutive quarters. • Approximately 91% of Q2 software revenue was recurring – a milestone – the first time recurring software revenue crossed the 90% threshold.
Total Revenue: **GAAP** **Non-GAAP**	**$308** **$308**	10% 10%	5% 4%	• Total revenue grew double-digits for the first time since Q2'12 on 12% software revenue growth combined with a solid quarter for professional services.
EPS: **GAAP** **Non-GAAP**	**$0.07** **$0.34**	804% 14%	329% (1%)	• GAAP EPS improved by $0.08 YoY and non-GAAP EPS improved by $0.04 YoY, due to a combination of revenue growth and continued expense discipline.

Software Revenue Performance by Group

All references are to GAAP revenue, unless otherwise noted

In millions	Q2'18	YoY	YoY CC	Management Comments
Solutions Software Revenue	**$234**	10%	4%	• Solutions software revenue growth is due to the strong CAD, PLM and global channel bookings performance over the past several years, despite a 1000 basis point increase in subscription mix in Q2'18 compared to Q2'17. • Solutions recurring software revenue grew 14% YoY and has grown double-digits for five consecutive quarters. As our transition matures, recurring software revenue growth is expected to accelerate due to the compounding benefit of a subscription business model.
IoT Software Revenue	**$29**	33%	30%	• Recurring software revenue grew 34% YoY and 13% sequentially on continued strong bookings growth, driving our total IoT software growth. Q2'18 subscription mix was about flat with the same period a year ago. As our transition matures, recurring software revenue growth is expected to accelerate due to the compounding benefit of a subscription business model.

Software Revenue Performance by Region

All references are to GAAP revenue, unless otherwise noted

In millions	Q2'18	YoY	YoY CC	Management Comments
Americas Software Revenue	**$113**	6%	6%	• Strong bookings performance has been driving revenue growth in the Americas, with new bookings up 19% YoY, despite a 900 basis point increase in the subscription mix.
Europe Software Revenue	**$98**	20%	8%	• Europe revenue growth of 20% YoY is the result of six double-digit bookings growth quarters between Q4'16 and Q1'18, despite a 1200 basis point increase in the subscription mix in Q2'18 compared to Q2'17.
APAC Software Revenue	**$51**	10%	5%	• Double-digit revenue growth in APAC is due to the recent improvement in bookings performance, with Q2'18 (+7% YoY, +15% YTD) representing the third consecutive quarter of bookings growth following three consecutive quarters of decline. • Japan made continued progress on its recovery, delivering its usual significant sequential improvement in bookings performance from Q1 to Q2, and appears to be tracking to its full year plan.

Operating Performance

In millions	Q2'18	Management Comments
Professional Services Gross Margin: **GAAP** **Non-GAAP**	**17%** **21%**	• Q2'18 non-GAAP margin of 21% exceeded the 20% target set back in November 2014, a milestone for the Company. • We expect to achieve our target non-GAAP professional services gross margin of 20% for the full fiscal year.
Operating Expense: **GAAP** **Non-GAAP**	**$202** **$179**	• Both GAAP and non-GAAP operating expense were within our guidance ranges due to continued expense discipline.
Operating Margin: **GAAP** **Non-GAAP**	**7%** **18%**	• Both GAAP and non-GAAP operating margin were above the high end of our guidance ranges due to revenue results above expectations and costs in line with our guidance.
Tax Rate: **GAAP** **Non-GAAP**	**31%** **9%**	

Other Highlights in Quarterly and Annual Operating Performance

- For Q2'18, annualized recurring revenue (ARR) was approximately $961 million, which grew 15% or $127 million year over year and grew 4% or $34 million sequentially. ARR has now grown double-digits for five consecutive quarters.

- Total Deferred Revenue consists of Billed Deferred Revenue and Unbilled Deferred Revenue. In Q2'18, Total Deferred Revenue grew 43% year-over-year and 8% sequentially. 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. For example, and as noted below, recurring revenue billings on April 1, which was included in Q2 in FY'17, but not FY'18, were approximately $79 million in 2018.

(in millions)	Q2'18 3/31/18	Q1'18 12/30/17	Q2'17 4/1/17	Q/Q % Change	Y/Y % Change
Billed Deferred Revenue	$498	$431	$492	15%	1%
Unbilled Deferred Revenue	$765	$738	$389	4%	97%
Total Deferred Revenue	**$1,263**	**$1,169**	**$881**	**8%**	**43%**

- Billed Deferred Revenue grew 1% year-over-year and 15% sequentially. Billed Deferred Revenue primarily relates to software agreements invoiced to customers for which the revenue has not yet been recognized. Billed Deferred Revenue can fluctuate quarterly based upon the contractual billings dates in our recurring revenue contracts, as well as the timing of our fiscal reporting periods. Note that our second fiscal quarter ended on March 31st this year, as opposed to April 1st a year ago. Recurring revenue billings on April 1, 2018 were approximately $79 million, so had Q2'18 ended on April 1 like Q2'17, Billed Deferred Revenue would have grown approximately 17% year over year.

- Unbilled Deferred Revenue grew 97% year-over-year and 4% sequentially. 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 generally 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. 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.

- For Q2'18, approximately 91% of GAAP and non-GAAP software revenue came from recurring revenue streams.

- For Q2'18, cash flow provided by operating activities was $111 million, and free cash flow was $106 million, both of which include cash payments of approximately $1 million related to our October 2015 restructuring plan.

- Cash, cash equivalents, and marketable securities totaled $355 million as of March 31, 2018.

- As of March 31, 2018, gross borrowings totaled $648 million, including $500 million of senior notes and $148 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 Q2'18 was 2.14. As of March 31, 2018, we had approximately $430 million available to borrow under the credit facility. We borrowed $150 million under our revolving credit facility in April 2018. We plan to repay $50 million in April and use the remaining $100 million to fund an accelerated share repurchase as described below.

- Continuing the phased global rollout of our subscription licensing model, we announced in January 2018 that new software licenses for our core solutions and ThingWorx industrial innovation platform will be available globally only by subscription, effective January 1, 2019, with a few exceptions. Those exceptions apply to China, Korea, Taiwan, Russia, Turkey and India where we have not yet announced the end-of-life of perpetual licenses. Also, Kepware will continue to be available under perpetual licensing. The transition to subscription-only licensing in the Americas and Western Europe became effective January 1, 2018. Customers globally will be able to continue to use their existing perpetual licenses and renew support on active licenses.

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 ($66 million, less a $7 million impact related to changes in foreign currency exchange rates), and the change in the related accounts receivable of approximately $22 million is included in other current assets and reported in "Other" below. In the "net" method, as reported by PTC, the net change of $37 million is included in deferred revenue. Cash flow from operating activities is the same in both cases.

(in millions) Cash flows from operating activities:	As Reported (Net) Q2'18 3/31/18	Pro Forma (Gross) Q2'18 3/31/18
Net income	$8	$8
Stock-based comp and D&A	39	39
Accounts receivable	10	10
Deferred revenue	37	59
Other	17	(5)
Net cash provided by operating activities	**$111**	**$111**

Q3'18 and FY'18 Guidance

Our Q3'18 and FY'18 guidance includes the following general considerations:

- 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.
- 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 has improved in recent quarters, we still have work to do. Therefore, 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.
- We expect to execute an accelerated stock repurchase agreement ("ASR") on April 20, 2018, under which we will repurchase $100 million worth of shares. We expect to complete repurchases under the ASR by the end of our fiscal Q3'18.

Q3'18 and FY'18 Operating Guidance

In millions	Q3'18 Low	Q3'18 High	FY'18 Low	FY'18 High	Management Comments
Subscription ACV	$44	$48	$182	$190	• FY'18 guidance represents growth of approximately 27% to 33% compared to last year, and is based on continued adoption of our subscription offerings and the discontinuation of new perpetual license sales (except for Kepware) in the Americas and Western Europe which went into effect January 1, 2018. • Q3'18 guidance represents growth of approximately 51% to 66% compared to Q3'17 – recall that Q3'17 presents an easy comparison.
License and Subscription Bookings	$105	$115	$455	$475	• There is no change to FY'18 full year bookings guidance since the deal that slipped from Q2'18 closed early in Q3'18. • FY'18 guidance represents growth of approximately 9% to 13% compared to last year, and 12% to 17% when adjusting for the early close of the $7M mega-deal at the end of Q4'17. • Q3'18 guidance represents growth of 17% to 28% compared to Q3'17 – recall that Q3'17 presents an easy comparison.
Subscription % of Bookings	83%	83%	80%	80%	• There is no change to FY'18 subscription mix guidance as we still expect 80% of our bookings to be subscription in FY'18 vs. 69% in FY'17, with subscription mix exiting the year in the mid-80's in Q4'18. • For Q3'18 we expect 83% of our bookings to be subscription, based on our current view of the pipeline and the discontinuation of new perpetual license sales (except for Kepware) in the Americas and Western Europe as of January 1, 2018.

Q3'18 and FY'18 Financial Guidance

In millions	Q3'18 Low	Q3'18 High	FY'18 Low	FY'18 High	Management Comments
Subscription Revenue	$128	$130	$475	$480	• We increased FY'18 subscription revenue guidance by $13M at the midpoint, based on Q2'18 performance and our outlook for the remainder of the year, driven by the continued success of our subscription transition and conversion programs. • FY'18 guidance represents growth of approximately 69% to 71% compared to FY'17. • Q3'18 guidance represents growth of approximately 70% to 73% compared to Q3'17.
Support Revenue	$120	$120	$507	$507	• We decreased FY'18 support revenue guidance by $3M at the midpoint as more customers converted their perpetual licenses to subscription in the second quarter. • Based on the ongoing conversion trend, FY'18 guidance represents a decline of approximately 12% compared to FY'17 and Q3'18 guidance represents a decline of approximately 15% compared to Q3'17.
Perpetual License Revenue	$17	$20	$92	$97	• There is no change to FY'18 perpetual license revenue guidance. • FY'18 guidance represents a decline of approximately 29% at the midpoint, or $39 million, compared to FY'17 as an increasing proportion of our customers purchase software as a subscription. • Q3'18 guidance is down approximately 42% at the midpoint compared to Q3'17. • New perpetual licenses were no longer available for sale in the Americas and Western Europe as of January 1, 2018, except for Kepware.
Software Revenue	$265	$270	$1,074	$1,084	• We increased FY'18 software revenue guidance by $10M at the midpoint, based on Q2'18 performance and our outlook for the remainder of the year. • FY'18 guidance represents growth of approximately 9% to 10% compared to FY'17, despite a higher subscription mix (1100 basis points) than last year; and recurring software revenue guidance represents growth of approximately 15% compared to FY'17. • Q3'18 guidance represents growth of approximately 7% to 9% compared to Q3'17 and recurring software revenue guidance represents growth of approximately 15% to 16% compared to Q3'17. • At the midpoint, we expect 91% of our software revenue to be recurring for the full fiscal year.
Professional Services Revenue	$45	$45	$176	$176	• We increased FY'18 professional services revenue guidance by $3M, based on Q2'18 performance and our outlook for the remainder of the year. • FY'18 guidance is down approximately 1% YoY compared to FY'17 due to the contracting 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. • Q3'18 guidance represents growth of approximately 2% compared to Q3'17.
Total Revenue	$310	$315	$1,250	$1,260	• We increased FY'18 total revenue guidance by $13M, based on Q2'18 performance and our outlook for the remainder of the year, driven by a $10M increase in recurring software revenue due to slightly higher renewal rates than previously planned. • FY'18 guidance represents growth of approximately 7% to 8% compared to FY'17, despite an 1100 basis point increase in subscription mix, driving a $39 million decline (at the midpoint) in perpetual software revenue. • Q3'18 guidance represents growth of approximately 6% to 8% compared to Q3'17.

Q3'18 and FY'18 Financial Guidance, Continued

In millions	Q3'18 Low	Q3'18 High	FY'18 Low	FY'18 High	Management Comments
Operating Expense: **GAAP** **Non-GAAP**	$208 $184	$211 $187	$824 $729	$834 $739	• FY'18 non-GAAP guidance represents an increase of approximately 6% to 7% compared to FY'17. We estimate that approximately 200 basis points of the YoY growth is related to Fx. • Consistent with our long-term model, non-GAAP operating expense growth is targeted at about half of bookings growth.
Operating Margin: **GAAP** **Non-GAAP**	5% 16%	7% 17%	7% 17%	7% 18%	• We are maintaining our FY'18 non-GAAP operating margin guidance. • FY'18 non-GAAP guidance represents improvement of approximately 130 bps to 170 bps compared to FY'17; Q3'18 non-GAAP guidance represents improvement of approximately 100 bps to 200 bps compared to Q3'17. • FY'18 GAAP guidance represents improvement of approximately 360 bps compared to FY'17 and Q3'18 GAAP guidance represents improvement of approximately 220 bps at the midpoint compared to Q3'17. • Please note that we are guiding to margin improvement in FY'18 despite guiding to a higher subscription mix than FY'17 (1100 basis points higher).
Tax Rate: **GAAP** **Non-GAAP**	15% 11%	15% 9%	5% 11%	5% 9%	• Both GAAP and non-GAAP guidance are based on current estimates.
Shares Outstanding: **GAAP** **Non-GAAP**	118 118	118 118	118 118	118 118	• Both GAAP and non-GAAP guidance are based on current estimates.
EPS: **GAAP** **Non-GAAP**	$0.04 $0.30	$0.07 $0.34	$0.31 $1.31	$0.38 $1.41	• We increased FY'18 non-GAAP guidance by $0.02 and increased FY'18 GAAP guidance at the midpoint by $0.02 based on Q2'18 performance, the improved revenue outlook for the year and continued expense discipline. • FY'18 non-GAAP guidance represents growth of approximately 12% to 20% compared to FY'17 and Q3'18 non-GAAP guidance represents growth of approximately 8% to 21% compared to Q3'17. • FY'18 GAAP EPS represents growth of approximately $0.26 to $0.33 compared to FY'17 and Q3'18 GAAP guidance represents growth of approximately $0.05 to $0.08 compared to Q3'17. • Please note that we are guiding to EPS improvement in FY'18 despite guiding to a higher subscription mix than FY'17 (1100 basis points higher).
Free Cash Flow **Adjusted Free Cash Flow**			$210 $214	$220 $224	• We increased Free Cash Flow guidance by $15 million to reflect our first half performance and improved revenue outlook. • 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. • Guidance also includes approximately $4M of payments related to our October 2015 restructuring plan, which we exclude from Adjusted Free Cash Flow.

The third 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	Q3'18	FY'18
Effect of acquisition accounting on fair value of acquired deferred revenue	$ 0	$ 1
Restructuring charges	-	(1)
Headquarters relocation charges (1)	2	5
Intangible asset amortization expense	15	58
Stock-based compensation expense	17	71
Total Estimated GAAP adjustments	**$ 34**	**$ 134**

(1) Represents accelerated depreciation expense recorded in anticipation of exiting our current headquarters facility. In 2019, we will be moving into a new worldwide headquarters in the Boston Seaport District and we will be vacating our current headquarters space. Because our current headquarters lease will not expire until November 2022, we are seeking to sublease that space. If we are unable to sublease our current headquarters space for an amount at least equal to our rent obligations under the current headquarters lease, we will bear overlapping rent obligations for those premises and will be required to record a charge related to any rent shortfall. A charge for such shortfall will be recorded in the earlier of the period that we cease using the space (which will likely occur in the second quarter of our fiscal 2019), or the period we exit the lease contract. Additionally, we will incur other costs associated with the move which will be recorded as incurred.

Long-Range Targets (Non-GAAP)

Our long-range, non-GAAP targets for fiscal 2021 are noted below. Please note that these targets are included in a long-term operating model presentation posted on our investor relations website at investor.ptc.com.

- $1.8 billion in total revenue, growing double-digits; $1.6 billion of software revenue, growing double-digits
- 85% subscription mix, yielding 95% recurring software revenue
- Non-GAAP operating margin in the low 30% range
- Non-GAAP EPS of $4.15, and
- Free cash flow of $525 million
- 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.

We intend to update the above long range, non-GAAP targets for fiscal 2021 and provide new targets through fiscal 2023 at our upcoming investor event at our LiveWorx conference on June 18, 2018.

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).

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, fiscal 2017, and fiscal 2018, 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 as of January of 2018, we 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.

Navigate Allocation -- Revenue and bookings for Navigate, a ThingWorx-based IoT solution for PLM are allocated 50% to Solutions and 50% to IoT.

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.

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, fair value adjustment to deferred services cost, stock-based compensation, amortization of acquired intangible assets, acquisition-related charges included in general and administrative costs, restructuring charges, headquarters relocation charges, and income tax adjustments. Additional information about the items we exclude from our non-GAAP financial measures and the reasons we exclude them can be found in "Non-GAAP Financial Measures" beginning on page 33 of our Annual Report on Form 10-K for the fiscal year ended September 30, 2017.

A reconciliation of non-GAAP measures to GAAP results is provided within these prepared remarks.

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 this press release that are not historic facts, including statements about our third quarter and full fiscal 2018 targets, and other future financial and growth expectations and targets and anticipated tax rates, and our plans to repurchase $100 million of our common stock in an accelerated repurchase transaction in the third quarter, 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 deteriorate; customers may not purchase our solutions or convert to subscription 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 transition to subscription-only licensing in the Americas and Western Europe could adversely affect sales and revenue; 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 or other matters could preclude share repurchases. 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. 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		Six Months Ended	
	March 31, 2018	April 1, 2017	March 31, 2018	April 1, 2017
GAAP revenue	$ 307,883	$ 280,040	$ 614,527	$ 566,367
Fair value adjustment of acquired deferred subscription revenue	75	411	191	1,057
Fair value adjustment of acquired deferred services revenue	233	262	480	530
Non-GAAP revenue	$ 308,191	$ 280,713	$ 615,198	$ 567,954
GAAP gross margin	$ 224,252	$ 198,210	$ 447,938	$ 402,422
Fair value adjustment of acquired deferred revenue	308	673	671	1,587
Fair value adjustment to deferred services cost	(96)	(108)	(200)	(221)
Stock-based compensation	2,767	3,207	5,694	6,101
Amortization of acquired intangible assets included in cost of revenue	6,556	6,389	13,231	12,777
Non-GAAP gross margin	$ 233,787	$ 208,371	$ 467,334	$ 422,666
GAAP operating income	$ 22,366	$ 7,513	$ 39,838	$ 12,074
Fair value adjustment of acquired deferred revenue	308	673	671	1,587
Fair value adjustment to deferred services cost	(96)	(108)	(200)	(221)
Stock-based compensation	17,026	21,577	35,357	39,565
Amortization of acquired intangible assets included in cost of revenue	6,556	6,389	13,231	12,777
Amortization of acquired intangible assets	7,895	7,946	15,716	16,013
Acquisition-related charges included in general and administrative costs	133	554	140	723
Restructuring charges, net	(839)	464	(734)	6,749
Headquarters relocation charges	953	-	953	-
Non-GAAP operating income [(1)]	$ 54,302	$ 45,008	$ 104,972	$ 89,267
GAAP net income (loss)	$ 7,922	$ (1,104)	$ 21,799	$ (10,245)
Fair value adjustment of acquired deferred revenue	308	673	671	1,587
Fair value adjustment to deferred services cost	(96)	(108)	(200)	(221)
Stock-based compensation	17,026	21,577	35,357	39,565
Amortization of acquired intangible assets included in cost of revenue	6,556	6,389	13,231	12,777
Amortization of acquired intangible assets	7,895	7,946	15,716	16,013
Acquisition-related charges included in general and administrative costs	133	554	140	723
Restructuring charges, net	(839)	464	(734)	6,749
Headquarters relocation charges	953	-	953	-
Non-operating credit facility refinancing costs	-	1,152	-	1,152
Income tax adjustments [(2)]	(80)	(2,787)	(11,080)	(2,639)
Non-GAAP net income	$ 39,778	$ 34,756	$ 75,853	$ 65,461
GAAP diluted earnings (loss) per share	$ 0.07	$ (0.01)	$ 0.19	$ (0.09)
Fair value adjustment of acquired deferred revenue	-	0.01	0.01	0.01
Stock-based compensation	0.14	0.18	0.30	0.34
Amortization of acquired intangibles	0.12	0.12	0.25	0.25
Acquisition-related charges	-	-	-	0.01
Restructuring charges, net	(0.01)	-	(0.01)	0.06
Headquarters relocation charges	0.01	-	0.01	-
Non-operating credit facility refinancing costs		0.01	-	0.01
Income tax adjustments	-	(0.02)	(0.09)	(0.02)
Non-GAAP diluted earnings per share	$ 0.34	$ 0.30	$ 0.64	$ 0.56
GAAP diluted weighted average shares outstanding	117,905	115,709	117,780	115,498
Dilutive effect of stock-based compensation plans	-	1,737	-	1,736
Non-GAAP diluted weighted average shares outstanding	117,905	117,446	117,780	117,234

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

	Three Months Ended		Six Months Ended	
	March 31, 2018	April 1, 2017	March 31, 2018	April 1, 2017
GAAP operating margin	7.3%	2.7%	6.5%	2.1%
Fair value of acquired deferred revenue	0.1%	0.2%	0.1%	0.3%
Fair value adjustment to deferred services cost	0.0%	0.0%	0.0%	0.0%
Stock-based compensation	5.5%	7.7%	5.8%	7.0%
Amortization of acquired intangibles	4.7%	5.1%	4.7%	5.1%
Acquisition-related charges	0.0%	0.2%	0.0%	0.1%
Restructuring charges, net	-0.3%	0.2%	-0.1%	1.2%
Headquarters relocation charges	0.3%	0.0%	0.2%	0.0%
Non-GAAP operating margin	17.6%	16.0%	17.1%	15.7%

(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 2018 and 2017 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. We have recorded the impact of the Tax Cuts and Jobs Act in our Q1'18 GAAP earnings, resulting in a non-cash benefit of approximately $7 million. We have excluded this benefit from our non-GAAP results.