

Train-to-Test Data

CSCP/CLTD/CPIM

5/23/19

Executive Summary

The following analysis* is intended to:

- Provide insight into Purchaser to Certified journey through the lens of Self Study vs. Instructor Led by each product so we can better align nurture efforts to key milestones.
- Help us better understand the journey by reviewing attrition rates at each milestone and how that compares to industry benchmark data provided by Holmes Corporation. Based on the data provided, we may be able uncover ways to remove certain barriers and decrease attrition rates to get us closer to industry benchmarks.
- Assist with goal planning. Based on the journey length and attrition rates provided, we have additional insight into when Learning System sales impact Exam sales by product and channel.
- Provide a foundation that ASCM and HC can continue to build on with other critical journey points such as membership and engagement with other products.

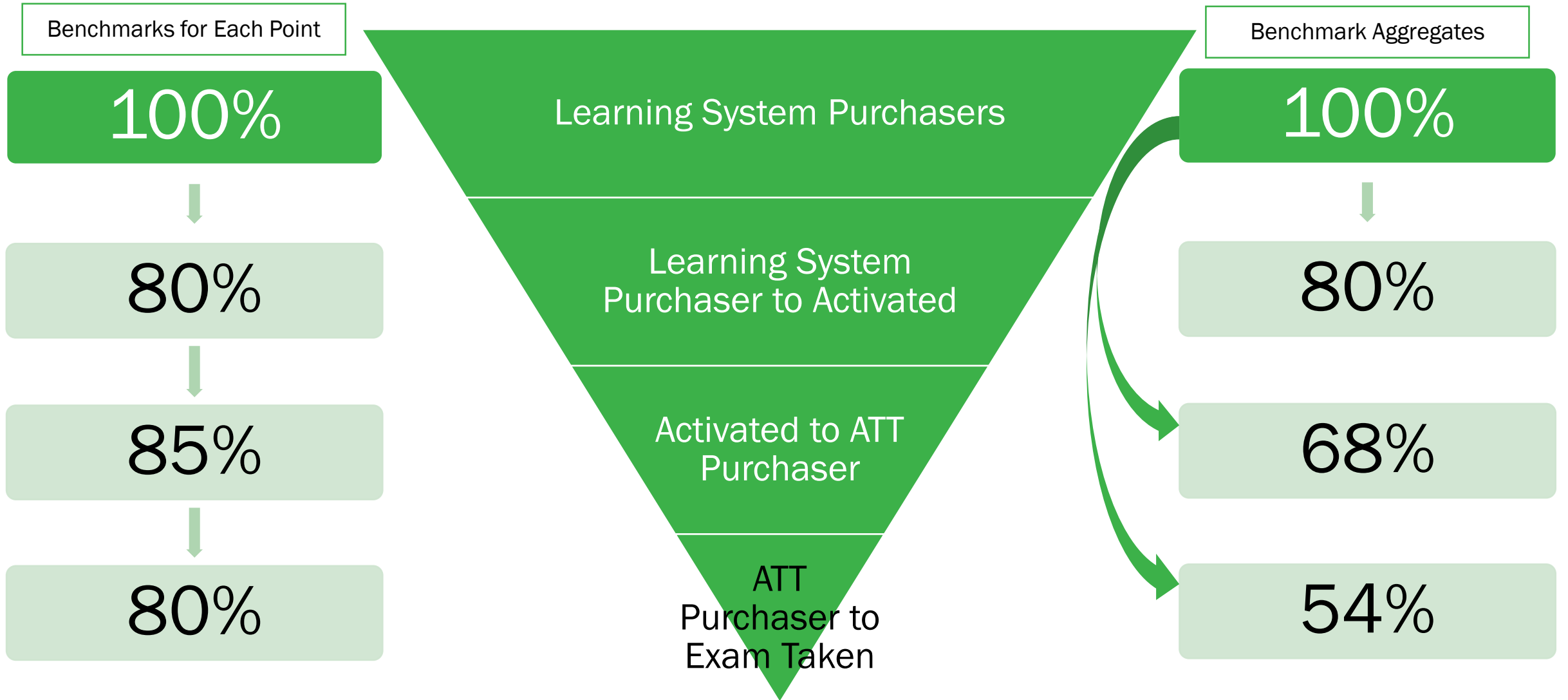
*This presentation and the contents within this presentation are intended only for consumption alongside a data analysis conversation. If there is information contained in this presentation that needs to be shared with a wider audience, an additional presentation should be scheduled or a different presentation or document supplied.

Record Matching Process

- Looked at records from 2017-2018
- Matched Learning System Purchasers to Leads, ATTs/Exam Credits purchased, Exams taken, and Certified individuals
- 27,331 records as a baseline of activated LS users
- Confidence level of 99%
- 2% margin of error
- Minimum sample size needed: 3,611
- Actual matched sample size: 7,271
- Matched based on email (secondary on member number and name)

LS Users	Number of Matched Records			
	Leads	ATT/Credit	Exam Taken	Certified
27,331	6,094	10,438	6,892	5,568

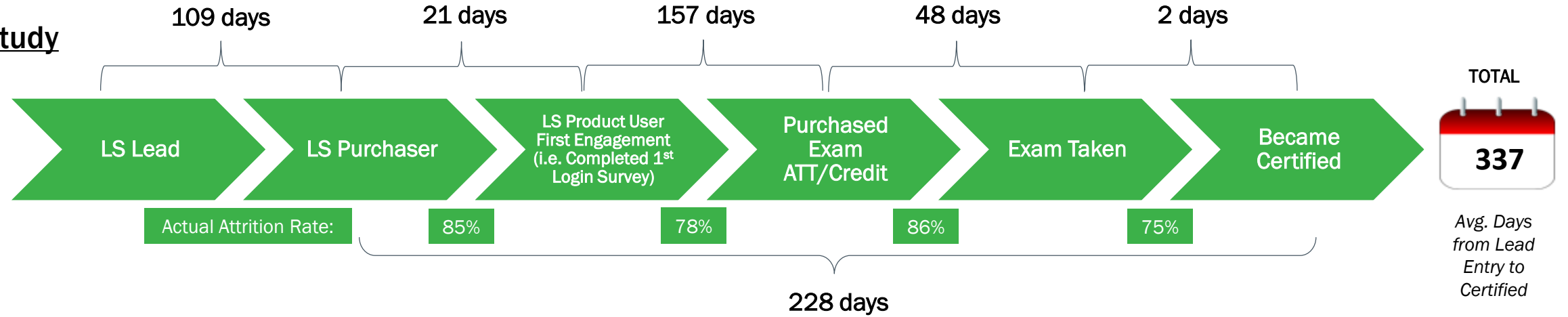
Benchmark Attrition Rates



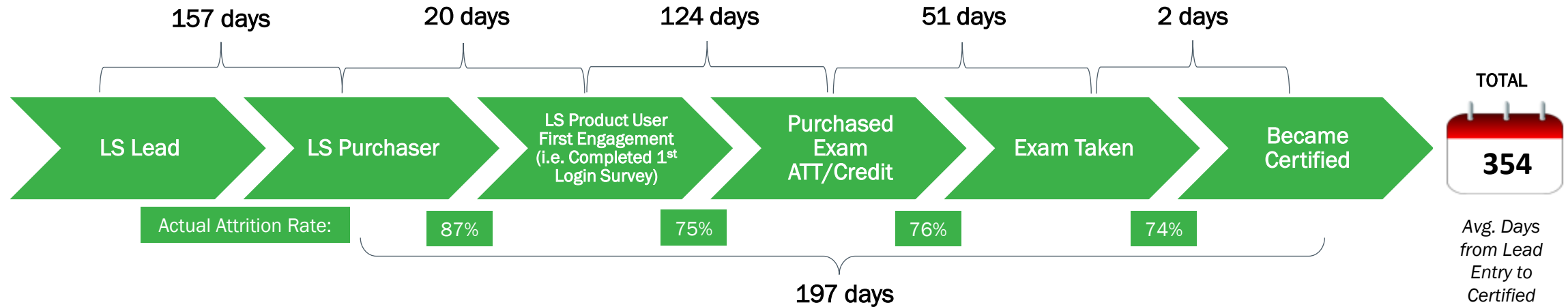
CSCP

APICS CSCP Learning System User Certification Journey (Avg. Days)

Self-Study



Instructor-Led



Noteworthy Items

Analysis reflects 2017-2018 user information

LS User Certification journey represents candidates who purchased and logged into LS, purchased Exam ATT/Credits, sat for the Exam, and became Certified

CSCP: Learning System Purchaser to Activation Attrition Rate

	Actual Numbers	Benchmark Numbers	Delta
Self-Study	85%	80%	+5%
Instructor-Led	87%	80%	+7%
Average	86%	80%	+6%

Notes and Action Items:

- Actual to benchmark numbers are above average.
- 20-21 days to activate is better than the expected average (~25 days)
- No action is needed for this student journey stage

CSCP: Activated to ATT Purchaser Attrition Rate

	Actual Numbers	Benchmark Numbers	Delta
Self-Study	78% ($\pm 8\%$)	85%	-7%
Instructor-Led	75% ($\pm 8\%$)	85%	-10%
Average	76% ($\pm 8\%$)	85%	-9%

Notes and Action Items:

- This data set has a larger margin of error for the actual numbers as there may be Learning System users that did purchase ATTs but they did not match our email/name data sets. With this in mind, the delta can be considered within the range of the benchmark. Although a 1-2% (especially for instructor-led) could be targeted.
- The average length of time between ATT purchase and sitting for the exam is ~36 days so CSCP students purchase their exams earlier in their studies than average.

CSCP: ATT Purchaser to Exam Taker Attrition Rate

	Actual Numbers	Benchmark Numbers	Delta
Self-Study	86%	80% ($\pm 2\%$)	+6%
Instructor-Led	76%	80% ($\pm 2\%$)	-4%
Average	80%	80% ($\pm 2\%$)	0

Notes and Action Items:

- Self-study numbers are performing well, however even with the 2% margin of error, the instructor-led numbers could be targeted to increase by 2-4 points.

CSCP: Learning System Exam Pass Rates

	Learning System Pass Rates	Overall Pass Rates	Delta
Self-Study	75%	63%	+12
Instructor-Led	74%	63%	+11
Average	74%	63%	+11

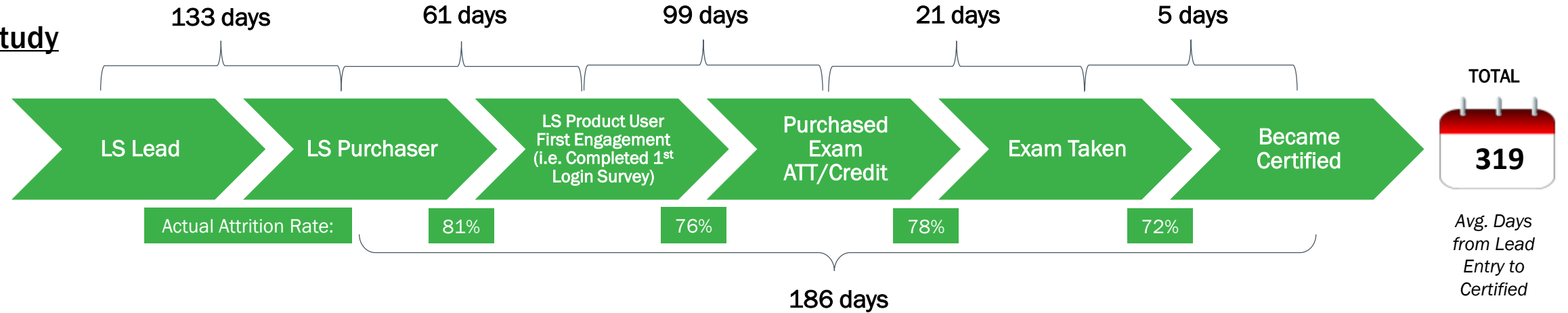
Notes and Action Items:

- Students who use the Learning System materials are 11-12% more likely to pass the exam than non-Learning System examinees.
- NOTE: Self-study students were 1% more likely to pass than instructor-led students.

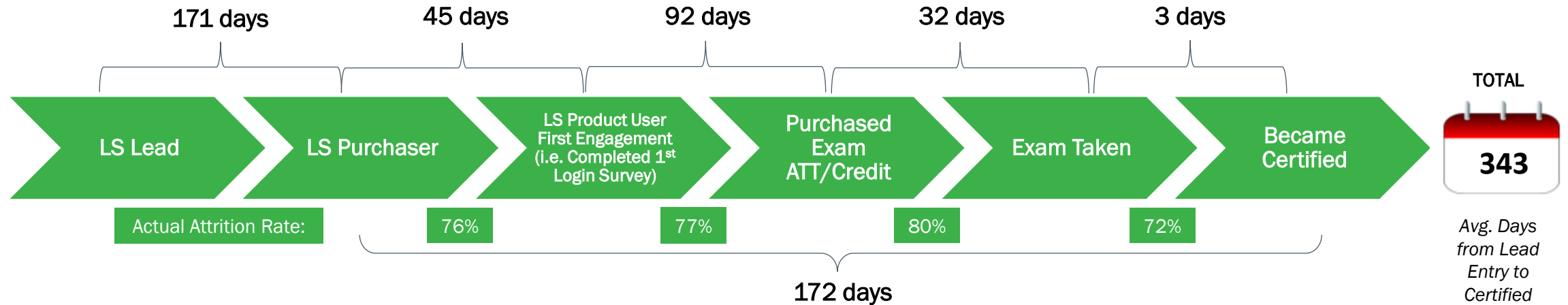
CLTD

APICS CLTD Learning System User Certification Journey (Avg. Days)

Self-Study



Instructor-Led



Noteworthy Items

Analysis reflects 2017-2018 user information

LS User Certification journey represents candidates who purchased and logged into LS, purchased Exam ATT/Credits, sat for the Exam, and became Certified

CLTD: Learning System Purchaser to Activation Attrition Rate

	Actual Numbers	Benchmark Numbers	Delta
Self-Study	81%	80%	+1%
Instructor-Led	76%	80%	-4%
Average	79%	80%	-1%

Notes and Action Items:

- Self-study numbers are performing well compared to benchmark, however the instructor-led numbers could be targeted to increase 4% points.
- 45-61 days to activate is longer than the expected average (~25 days).
- We have recently launched a 7-day automated reminder to encourage activation

CLTD: Activated to ATT Purchaser Attrition Rate

	Actual Numbers	Benchmark Numbers	Delta
Self-Study	76% ($\pm 8\%$)	85%	-9%
Instructor-Led	77% ($\pm 8\%$)	85%	-8%
Average	77% ($\pm 8\%$)	85%	-8%

Notes and Action Items:

- This data set has a larger margin of error for the actual numbers as there may be Learning System users that did purchase ATTs but they did not match our email/name data sets. With this in mind, the delta can be considered within the range of the benchmark. Although a 1% could be targeted.
- The average length of time between ATT purchase and sitting for the exam is ~36 days so CLTD students purchase their exams later in their studies than average.

CLTD: ATT Purchaser to Exam Taker Attrition Rate

	Actual Numbers*	Benchmark Numbers	Delta
Self-Study	78%	80% ($\pm 2\%$)	-2%
Instructor-Led	80%	80% ($\pm 2\%$)	0
Average	79%	80% ($\pm 2\%$)	-1%

Notes and Action Items:

- Actuals are within the 2% range of the benchmark although a 1-2% increase could be targeted.

CLTD: Learning System Exam Pass Rates

	Learning System Pass Rates	Overall Pass Rates	Delta
Self-Study	72%	72%	0
Instructor-Led	72%	72%	0
Average	72%	72%	0

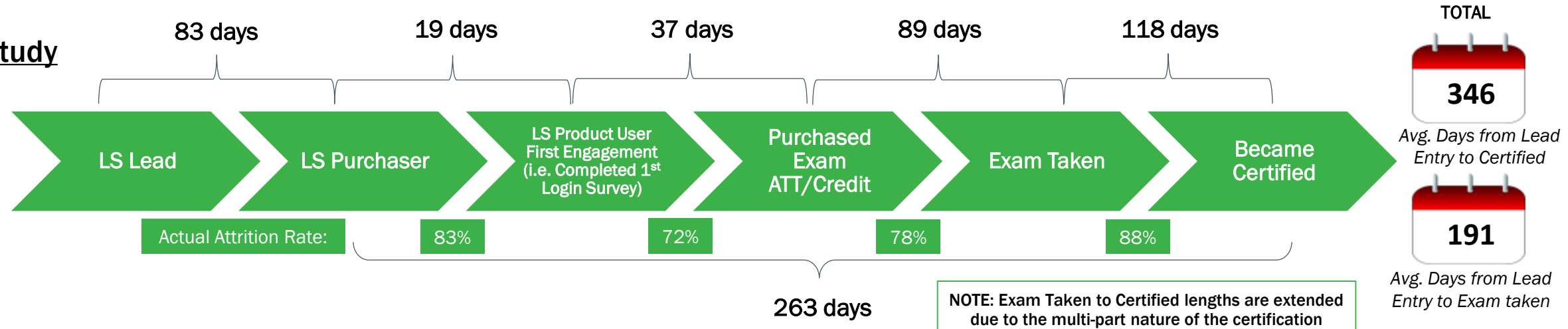
Notes and Action Items:

- It is highly likely due to the nature of the CLTD certification (it is newer on the market) that nearly 100% of exam takers are also Learning System users, therefore there is not a distinction between LS pass rates and overall pass rates.
- If the pass rates are where they are expected to be, then the LS is performing as it should. We cannot make the LS pass rates “higher” than the average if the entire population are also LS users.

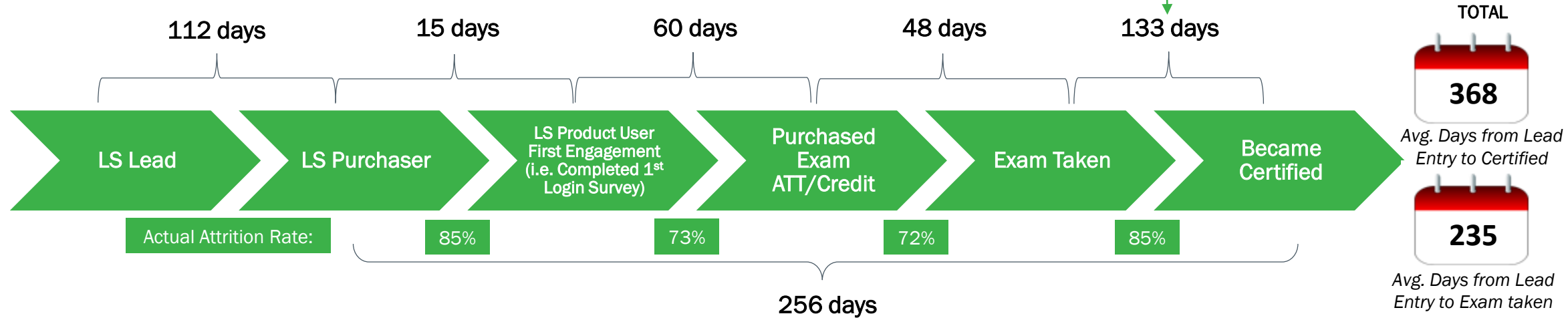
CPIM 1 (non-bundles)

APICS CPIM Part 1 Learning System User Certification Journey (Avg. Days)

Self-Study



Instructor-Led



Noteworthy Items

Analysis reflects 2017-2018 user information

LS User Certification journey represents candidates who purchased and logged into LS, purchased Exam ATT/Credits, sat for the Exam, and became Certified

CPIM 1: Learning System Purchaser to Activation Attrition Rate

	Actual Numbers	Benchmark Numbers	Delta
Self-Study	83%	80%	+3%
Instructor-Led	85%	80%	+5%
Average	84%	80%	+4%

*NOTE: Bundle purchasers activated 88% of the time showing that bundle purchasers were more likely to activate their online materials than non-bundle purchasers

Notes and Action Items:

- Actual to benchmark numbers are above average.
- 15-19 days to activate is better than the expected average (~25 days)
- No action is needed for this student journey stage

CPIM 1: Activated to ATT Purchaser Attrition Rate

	Actual Numbers	Benchmark Numbers	Delta
Self-Study	72% ($\pm 8\%$)	85%	-13%
Instructor-Led	73% ($\pm 8\%$)	85%	-12%
Average	72% ($\pm 8\%$)	85%	-13%

Notes and Action Items:

- This data set has a larger margin of error for the actual numbers as there may be Learning System users that did purchase ATTs but they did not match our email/name data sets.
- Even with the margin of error, a 4-5% increase could be targeted for these users to get up to benchmark numbers. Note that this data set does not include bundles since 100% of bundle purchasers would have technically purchased the ATT.
- The average length of time between ATT purchase and sitting for the exam is ~36 days so CPIM 1 students purchase their exams earlier in their studies than average.

CPIM 1: ATT Purchaser to Exam Taker Attrition Rate (non-bundle)

	Actual Numbers*	Benchmark Numbers	Delta
Self-Study	78%	80% ($\pm 2\%$)	-2%
Instructor-Led	72%	80% ($\pm 2\%$)	-8%
Average	75%	80% ($\pm 2\%$)	-5%

Notes and Action Items:

- Actuals are within benchmarks for self-study but below benchmarks for instructor-led so this is an area we can target.
- Self-Study students are 6% more likely to sit for the exam, train instructors on how to better coach students to sit for the exam and to help to build confidence rather than confusion or distrust.
- Calling campaigns to ATT purchasers who have not sat for the exam with a set survey questions.

CPIM 1: Learning System Exam Pass Rates

	Learning System Pass Rates	Overall Pass Rates	Delta
Self-Study	88%	79%	+9
Instructor-Led	85%	79%	+6
Average	86%	79%	+7

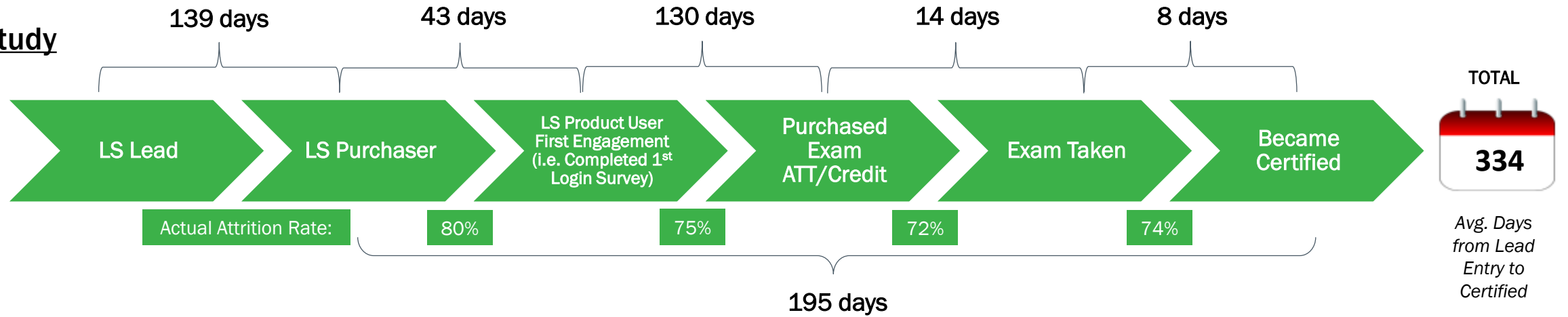
Notes and Action Items:

- Students who use the Learning System materials are 6-9% more likely to pass the exam than non-Learning System examinees.
- As these numbers exceed the general pass rates—no new actions need to be taken to ensure the Learning System materials are better preparing students as the current update process is providing such positive results.
- NOTE: Self-study students were 3% more likely to pass than instructor-led students

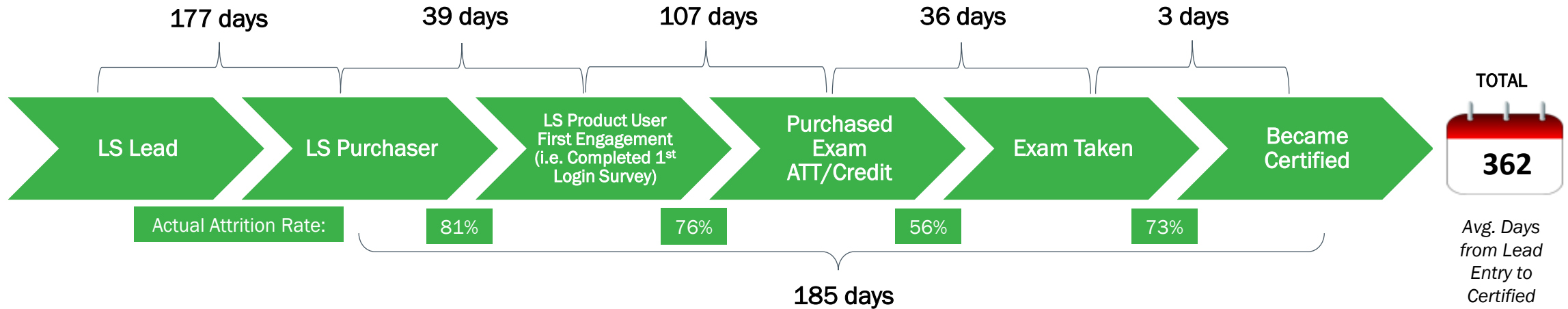
CPIM 2 (non-bundles)

APICS CPIM Part 2 Learning System User Certification Journey (Avg. Days)

Self-Study



Instructor-Led



Noteworthy Items

Analysis reflects 2017-2018 user information

LS User Certification journey represents candidates who purchased and logged into LS, purchased Exam ATT/Credits, sat for the Exam, and became Certified

CPIM 2: Learning System Purchaser to Activation Attrition Rate

	Actual Numbers	Benchmark Numbers	Delta
Self-Study	80%	80%	0
Instructor-Led	81%	80%	+1%
Average	80%	80%	0

*NOTE: Bundle purchasers activated 88% of the time showing that bundle purchasers were more likely to activate their online materials than non-bundle purchasers

Notes and Action Items:

- Actual to benchmark numbers are at or above average.
- 39-43 days to activate is longer than the expected average (~25 days)
- We have recently launched a 7-day automated reminder to encourage activation.

CPIM 2: Activated to ATT Purchaser Attrition Rate

	Actual Numbers	Benchmark Numbers	Delta
Self-Study	75% ($\pm 8\%$)	85%	-10%
Instructor-Led	76% ($\pm 8\%$)	85%	-9%
Average	76% ($\pm 8\%$)	85%	-9%

Notes and Action Items:

- This data set has a larger margin of error for the actual numbers as there may be Learning System users that did purchase ATTs but they did not match our email/name data sets. With this in mind, the delta can be considered within the range of the benchmark. Although a 1-2% increase could be targeted.
- The average length of time between ATT purchase and sitting for the exam is ~36 days so CPIM 2 students purchase their exams later in their studies or on average.

CPIM 2: ATT Purchaser to Exam Taker Attrition Rate (non-bundle)

	Actual Numbers*	Benchmark Numbers	Delta
Self-Study	72%	80% ($\pm 2\%$)	-8%
Instructor-Led	56%	80% ($\pm 2\%$)	-24%
Average	64%	80% ($\pm 2\%$)	-16%

Notes and Action Items:

- All numbers could be targeted for an increase. Self-study by 6-8% and instructor-led by 22-24% which is a significant number.
- Self-Study students are 16% more likely to sit for the exam, train instructors on how to better coach students to sit for the exam and to help to build confidence rather than confusion or distrust.
- Calling campaigns to ATT purchasers who have not sat for the exam with a set survey questions.

CPIM 2: Learning System Exam Pass Rates

	Learning System Pass Rates	Overall Pass Rates	Delta
Self-Study	74%	61%	+13
Instructor-Led	73%	61%	+12
Average	73%	61%	+12

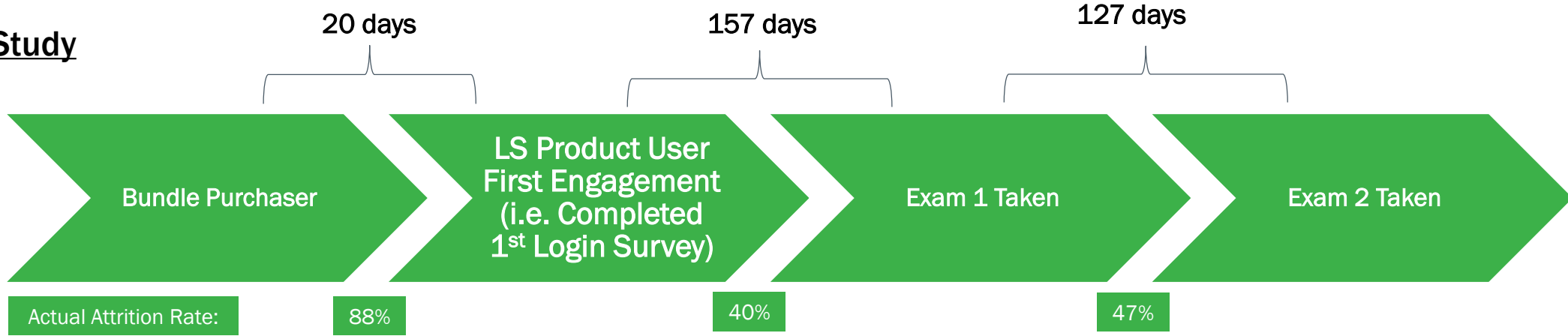
Notes and Action Items:

- Students who use the Learning System materials are 12-13% more likely to pass the exam than non-Learning System examinees.
- As these numbers exceed the general pass rates—no new actions need to be taken to ensure the Learning System materials are better preparing students as the current update process is providing such positive results.
- NOTE: Self-study students were 1% more likely to pass than instructor-led students

CPIM Bundles

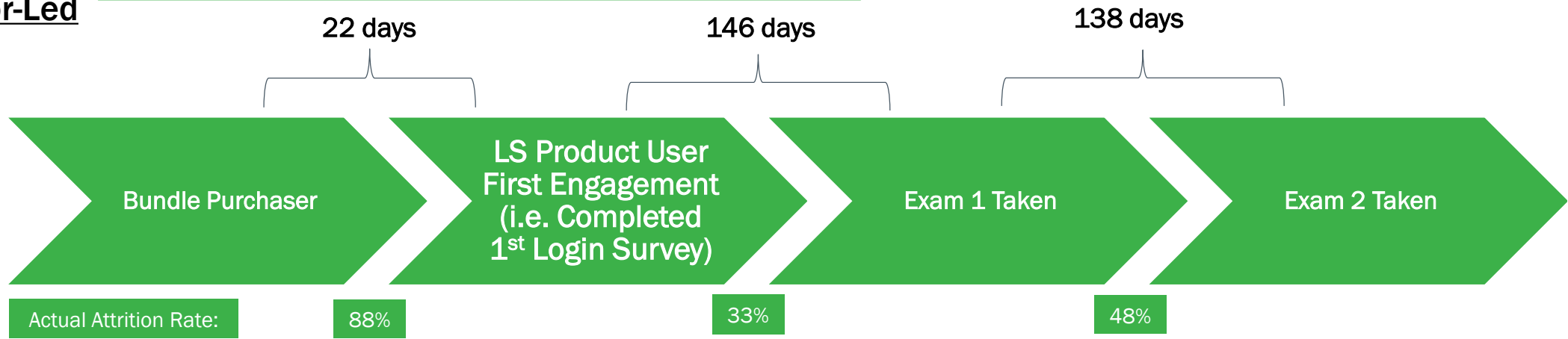
APICS CPIM Bundle Learning System User Certification Journey (Avg. Days)

Self-Study



NOTE: Bundle purchasers activated 88% of the time showing that bundle purchasers were more likely to activate their online materials than non-bundle purchasers

Instructor-Led



Noteworthy Items

Analysis reflects 2017-2018 user information

LS User Certification journey represents candidates who purchased and logged into LS, purchased Exam ATT/Credits, sat for the Exam, and became Certified

CPIM 1: ATT Purchaser (activated) to Exam Taker Attrition Rate (bundle)

	Actual Numbers*	Benchmark Numbers**	Delta
Self-Study	40%	54%	-14%
Instructor-Led	33%	54%	-21%
Average	37%	54%	-17%

*NOTE: These numbers only include bundle purchasers who (based on the average dates in the journey) would be expected to have sat. It does not include bundle purchasers who may have only recently purchased.

**NOTE: emulates expected usual attrition from activated to ATT purchaser

	Non-Bundle***	Bundle	Delta
Self-Study	56% (72% activated x 78% ATT purch.)	40%	-16%
Instructor-Led	53% (73% activated x 72% ATT purch.)	33%	-20%
Average	54% (72% activated x 75% ATT purch.)	37%	-17%

***NOTE: As the bundle numbers are calculated from actual purchasers to exam taker benchmarks, equivalent attrition rates were calculated from the same population set for non-bundle purchasers for comparison purposes.

Notes and Action Items:

- Clearly there is momentum upon initial purchase (high 88% activation) however there is a steep decrease (more than non-bundle users) in sitting for the exam. Perhaps the pressure is too overwhelming and it makes them more likely to drop their studies.
- A large focus on the bundles needs to occur to increase by 14-21%.

CPIM 2: ATT Purchaser (activated) to Exam Taker Attrition Rate (bundle)

	Actual Numbers*	Benchmark Numbers**	Delta
Self-Study	47%	54%	-7%
Instructor-Led	48%	54%	-6%
Average	48%	54%	-6%

*NOTE: These numbers only include bundle purchasers who (based on the average dates in the journey) would be expected to have sat. It does not include bundle purchasers who may have only recently purchased.

**NOTE: emulates expected usual attrition from activated to ATT purchaser

	Non-Bundle***	Bundle	Delta
Self-Study	54% (75% activated x 72% ATT purch.)	47%	-7%
Instructor-Led	43% (76% activated x 56% ATT purch.)	48%	+5%
Average	49% (76% activated x 64% ATT purch.)	48%	-1%

***NOTE: As the bundle numbers are calculated from actual purchasers to exam taker benchmarks, equivalent attrition rates were calculated from the same population set for non-bundle purchasers for comparison purposes.

Notes and Action Items:

- Clearly there is momentum upon initial purchase (88% activation) however there is a decrease (compared to non-bundle users) in sitting for the exam in self-study, however instructor-led shows a small increase. Perhaps the pressure is too overwhelming and it makes them more likely to drop their studies when they are self-study.
- A focus on the bundles needs to occur to increase by 6-7%. Numbers are a bit better for Part 2 than Part 1 so after they completed Part 1 they have a bit more momentum to complete than those just starting the bundle.

Exam Goal Planning

Unit Count Calculations Based on Benchmarks

Purchaser to ATT (68%)

non-bundle only

Purchaser to Examinee: 54%

bundle and non-bundle

CSCP

- LS Purchasers: 5,805
- ATT Goal: 3,947
- 160 days from LS purchase

CLTD

- LS Purchasers: 1,193
- ATT Goal: 811
- 149 days from LS purchase

CSCP

- LS Purchasers: 5,805
- Examinee Goal: 3,135
- 211 days from LS purchase

CLTD

- LS Purchasers: 1,613
(includes bundles)
- Examinee Goal: 871
- 175 days from LS purchase

CPIM1

- LS Purchasers: 9,020
- ATT Goal: 6,134
- 66 days from LS purchase

CPIM2

- LS Purchasers: 3,854
- ATT Goal: 2,621
- 160 days from LS purchase

CPIM1

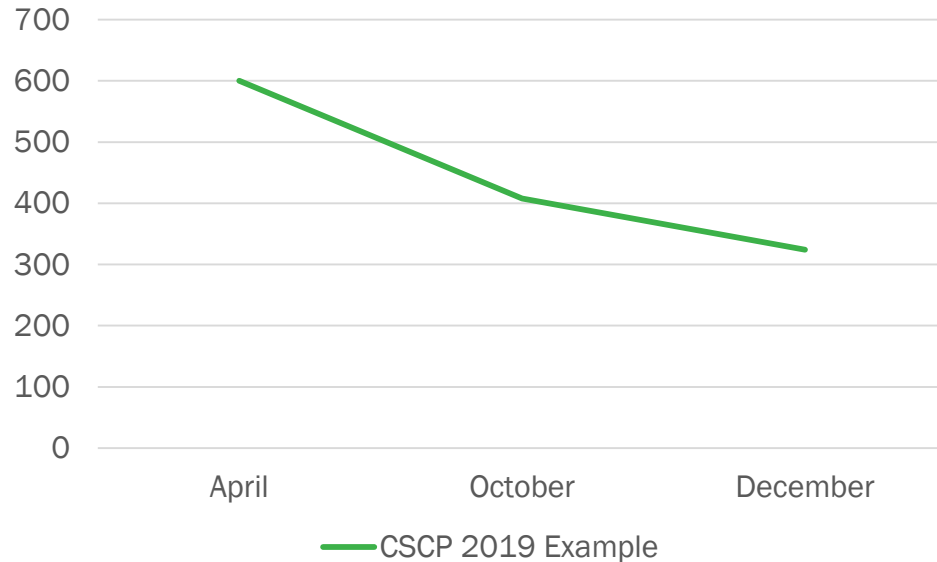
- LS Purchasers: 10,624
(includes bundles)
- Examinee Goal: 5,737
 - Non-Bundle: 134 days
 - Bundle: 173 days

CPIM2

- LS Purchasers: 5,458
(includes bundles)
- Examinee Goal: 2,947
 - Non-Bundle: 185 days
 - Bundle: 305 days

Example Goal with Expected Unit Delay

CSCP 2019 Example



Component	Units	Month
LS Purchased	600	April
ATT Purchased	408	October
Exam Taken	324	December

There is a 160 day delay for the ATT and a 211 day delay for the Exam from LS purchase date. This data can be extrapolated using the information in this deck for Self-Study and Instructor-Led as well as bundle journeys to target specific goals to the day.

This means that YTD exam sale goals can be targeted by the same YTD learning system sales goals, but with a 2 (CPIM 1) or 5 month delay (avg. for CSCP, CLTD, CPIM 2). Exam goals for 2019, for example, would look to actual sales from 2-5 months into the prior year for early year targets, and to Q1 and Q2 sales goals for the later year targets.

Multiple Certifications

1. There are a total of 40,345 unique, active LTD-2018 unique, APICS Certified individuals:
 - a. 3,713 (9%) have 2 certifications.
 - b. 399 (1%) individuals have 3 certifications.
2. The average time between individuals earning multiple certifications is 5.6 years (2,040 days)
3. Which certification is earned first:
 - a. CPIM 1st: 61%
 - b. CSCP 1st: 37%
 - c. CLTD 1st: 2%
4. Since CPIM has been around since 1975 it makes sense it is the most common 1st certification. However, since inception of CSCP in 2006, the percentage of CPIM certified first has dropped to 52% while those who have earned CSCP first has grown to 46%. On the surface, it would appear that more and more people are leaning towards CSCP over CPIM.