UNDERSTANDING STORY POINTS

Scott Downey

- 20+ Years in Software Engineering & Leadership
- Engineering Manager at Symantec Corporation
- Master Scrum Master at MySpace
  - 68 Scrum Teams across Three Sites
  - Created "Shock Therapy" Bootstrap Method
  - Created 8 Key Metrics for Measuring Scrum Growth
- Work Closely with Dr. Jeff Sutherland, Training & Consulting
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Agenda

To convince you to stop using Time for Estimates.
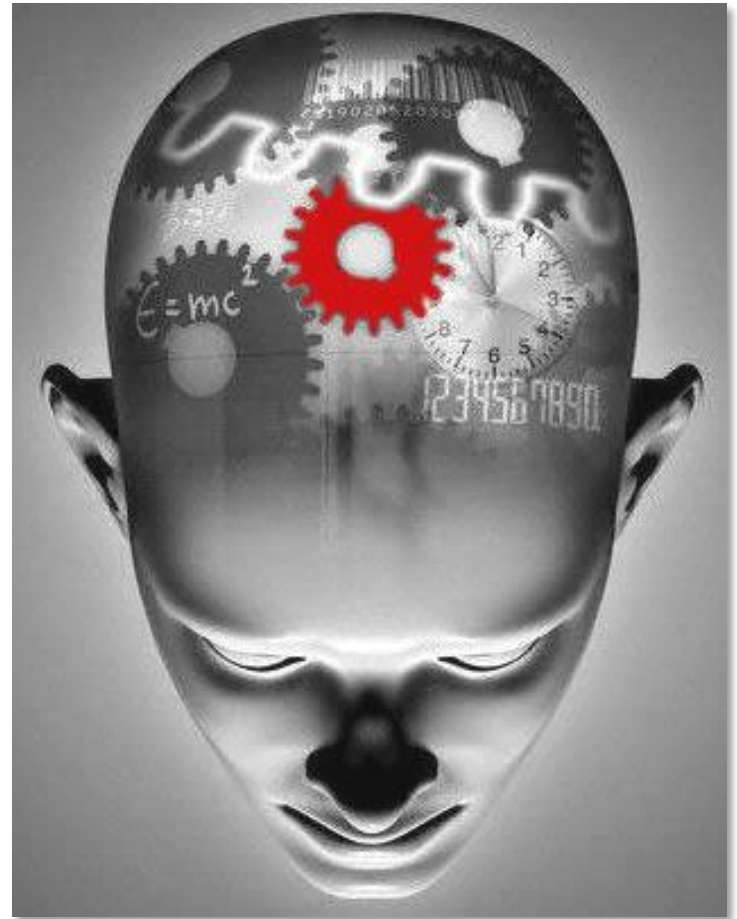
Agenda

- The Definition of Story Points
- The Elevator Pitch
  - Accuracy vs. Precision
  - Time vs. Progress
  - Consistency of Story Points
  - Consistency = Predictability
- Summary

The Definition of Story Points

The Basic Concept of Comparison Based Estimation

Story Points

- Team-Specific units of relative size used in estimating requirements.

- A unitless measure of magnitude for work yet to be done based on relative sizing.

- Enable effort to be estimated without trying to determine how long it will take.

Story Points

- Delphi Technique developed by RAND Corp. at the beginning of the Cold War in the 1940s.

- Wide Band Delphi Technique, from the 1970s, increased communication dramatically over the Delphi Technique.

- Story Points are based on Wide Band Delphi.

Story Points mean…

ABSOLUTELY

NOTHING

(at first)

The Elevator Pitch

Story Point Estimates are Superior.

The Elevator Pitch

- ❑ Predicting Completion is why we estimate work.

- ❑ *Accuracy* and *Precision* are not the same thing. *Precision* is a lot more expensive.

- ❑ *Precision* is always desired, but *Accuracy* creates more value.

- ❑ Story Points provide sufficient Accuracy when working in Non-Deterministic Systems.

- ❑ *Time* has no direct relationship to *Progress*, but the rate of *Complexity Resolution* will forecast Completion.

- ❑ Because Velocity stabilizes Story Point estimates, you get more Predictability which is the goal of creating estimates.

- ❑ Story Point Estimates are superior.

Accuracy is more Valuable than Precision

[Accurate, Imprecise] estimates create more value than [Precise, Inaccurate] estimates.

Accuracy vs. Precision

- **Accuracy:** Quality of being very near the true value
- **Precision:** Specific; Exact; Neither More nor Less

Precision:

Scott Downey was born on Tuesday, April 23, 1985 at 3:08:32 PM Pacific Standard Time.

Accuracy:

Scott Downey was born before 1985.

Conclusion:

While Accuracy *with* Precision is desirable, Accuracy is the more valuable of the two.

Accuracy vs. Precision

W. Edwards Deming

Attempts to force non-deterministic systems to operate at greater than 80% efficiency will cause short bursts of stabilization followed by extreme periods of destructive and unpredictable variations from that goal.

Accuracy vs. Precision
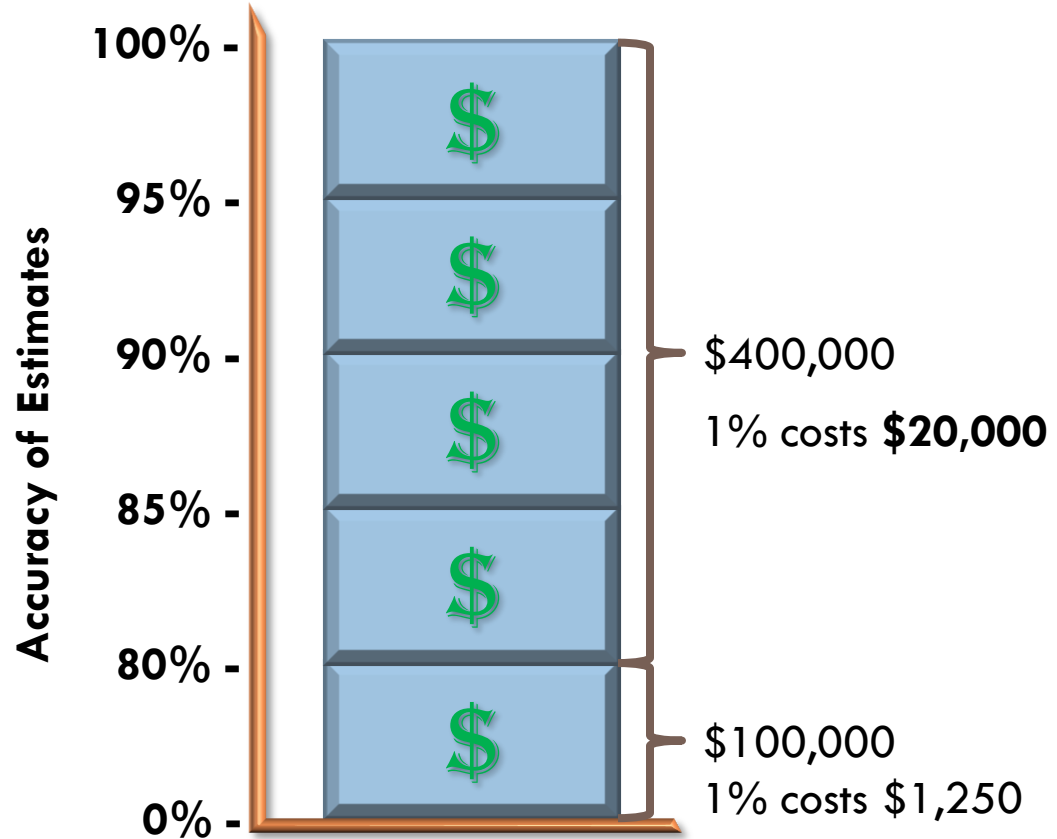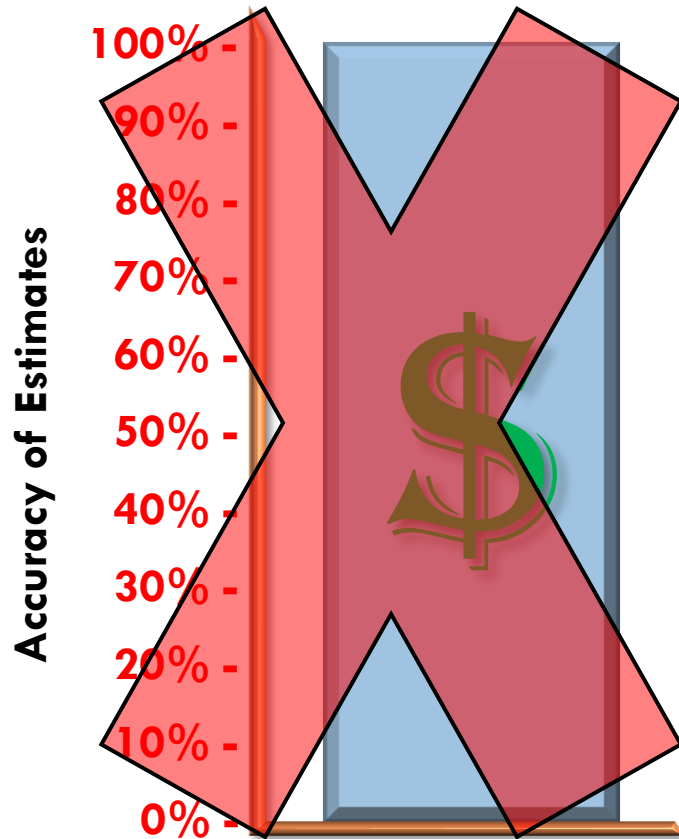
Each dollar you pour into estimation does not buy you the same increment of additional knowledge.
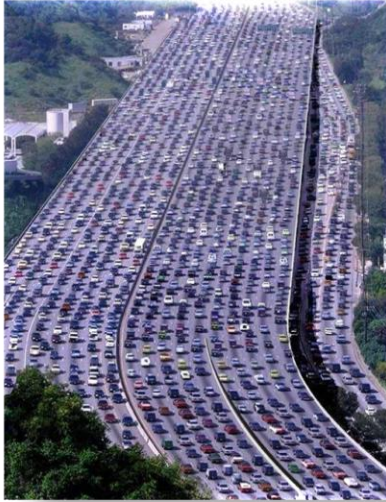
Conclusion:

Given the nature of non-deterministic systems, Story Point estimates are sufficiently Accurate, and create less waste and misunderstanding.

Time Does Not Measure Progress

Time has no direct relationship to Progress, but Resolved Complexity consistently forecasts Completion.

Time ≠ Progress

**Time-Based Questions
Tell You Nothing About Progress.**

What time did you leave?

When will you arrive?

How long will the trip take?

**Progress-Based Questions
Do Give You A Sense of Time.**

How is traffic right now?

Which route are you taking?

Where are you now?

Conclusion:

Tracking Time tells us *nothing* about progress toward a goal or feasibility of expected completion.
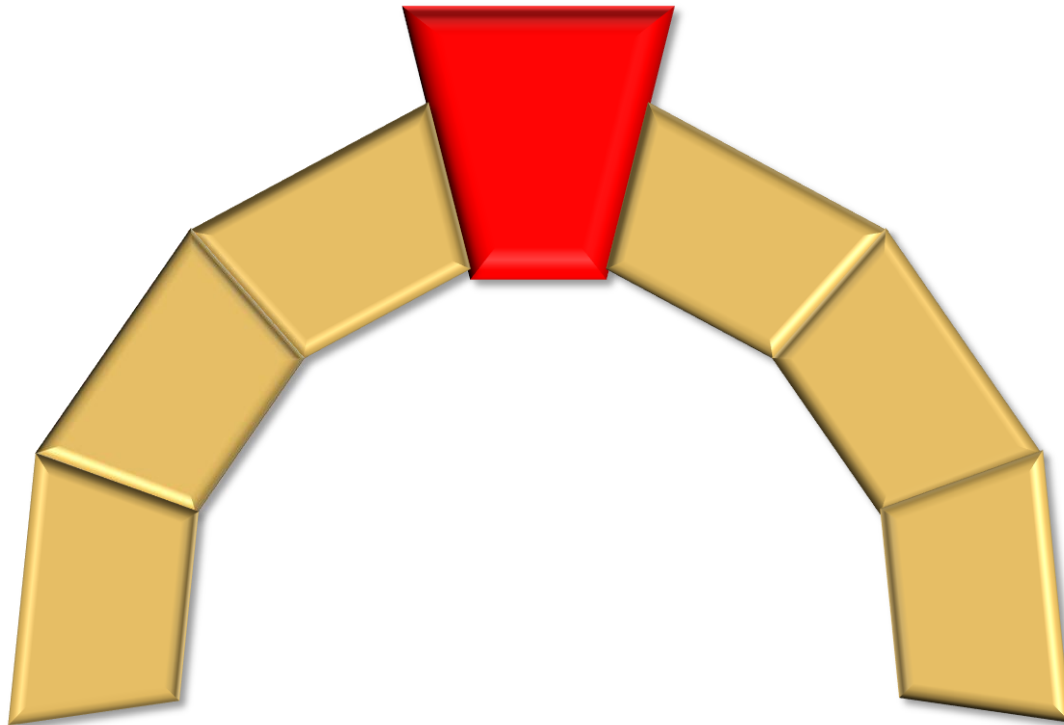
Consistency is a Must to Create Predictability

Velocity stabilizes Story Point estimates to create Predictability, which is the goal of creating estimates.
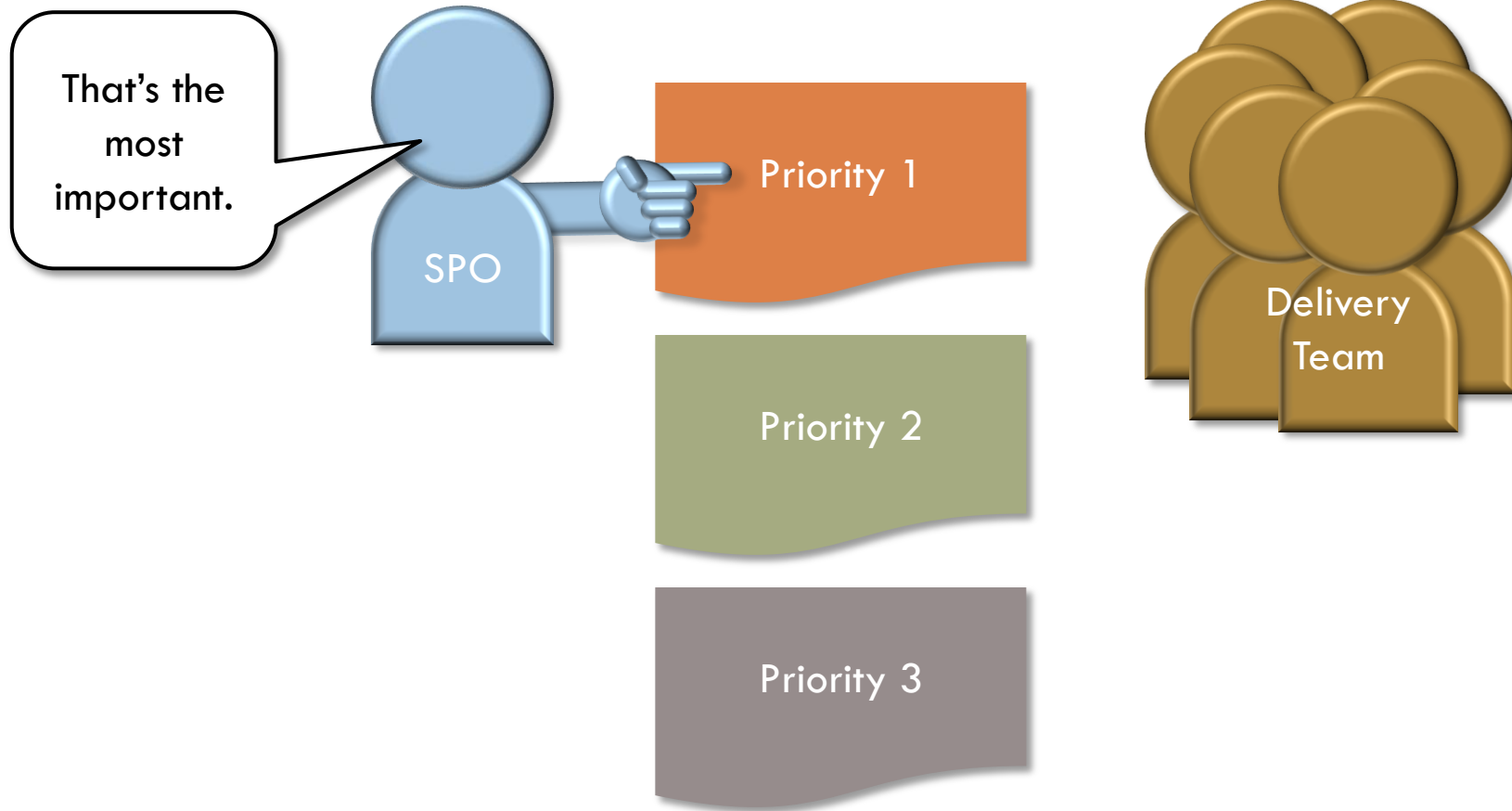
Consistency = Predictability

Keystone: A central cohesive source of support and stability;

The architectural piece that locks other pieces into position;

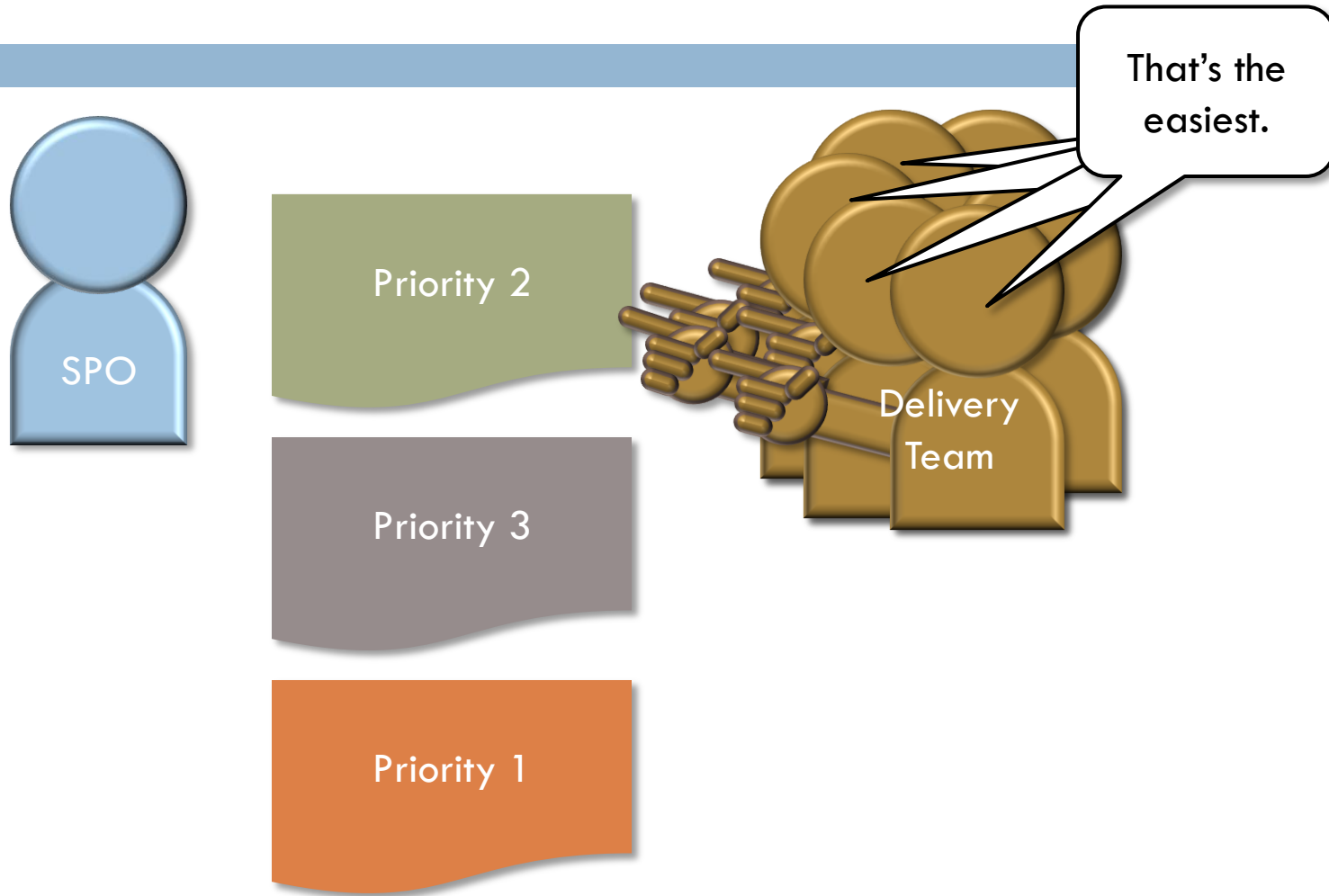That which provides structural integrity.

Consistency = Predictability

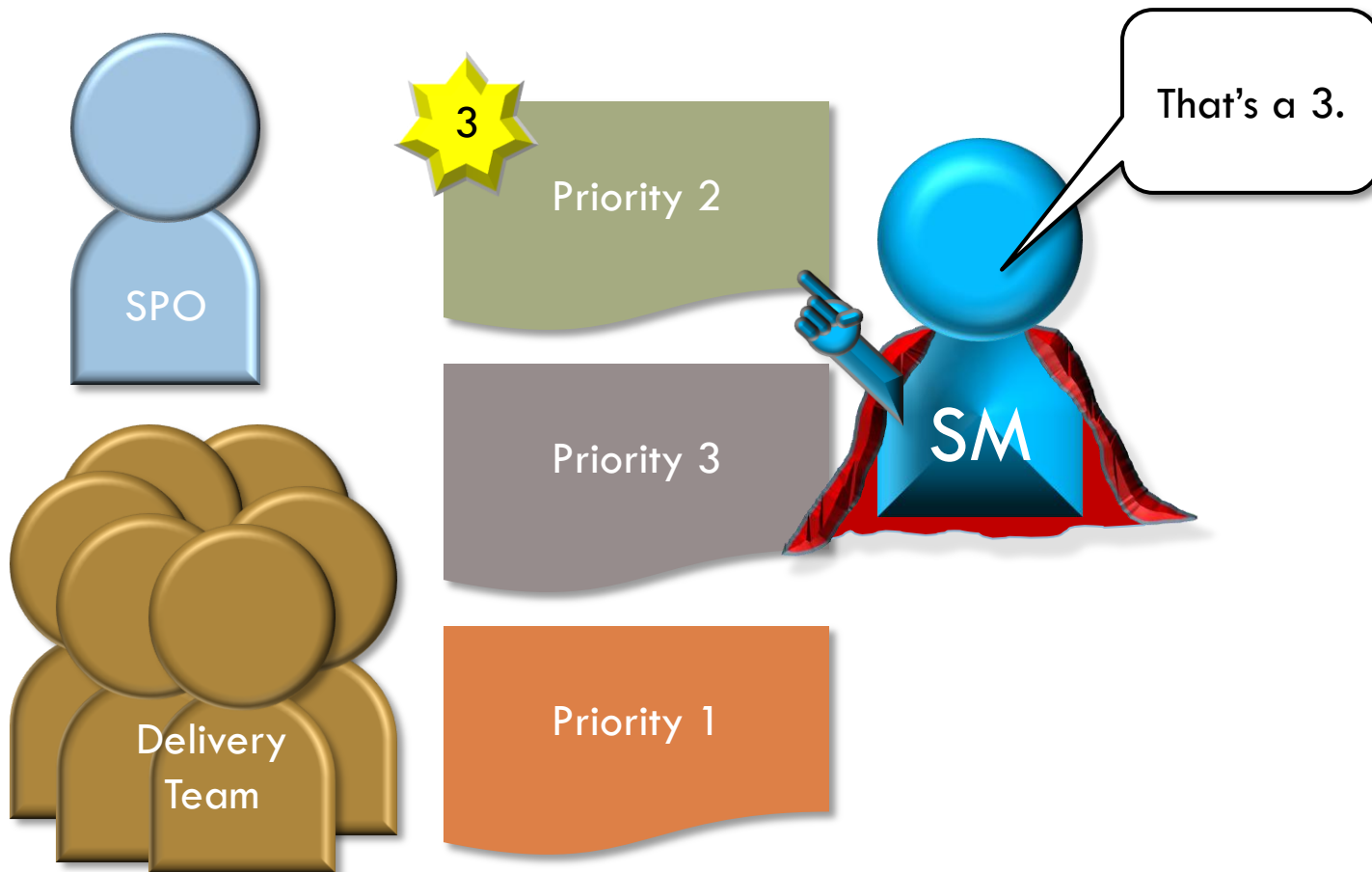Step 1: Prioritize all outstanding work.

Consistency = Predictability

Step 2**: Identify (one of the) simplest task(s) from the queue of outstanding work.

**NOTE: Work is always pursued in Priority Order. It is only re-ordered temporarily for this exercise.
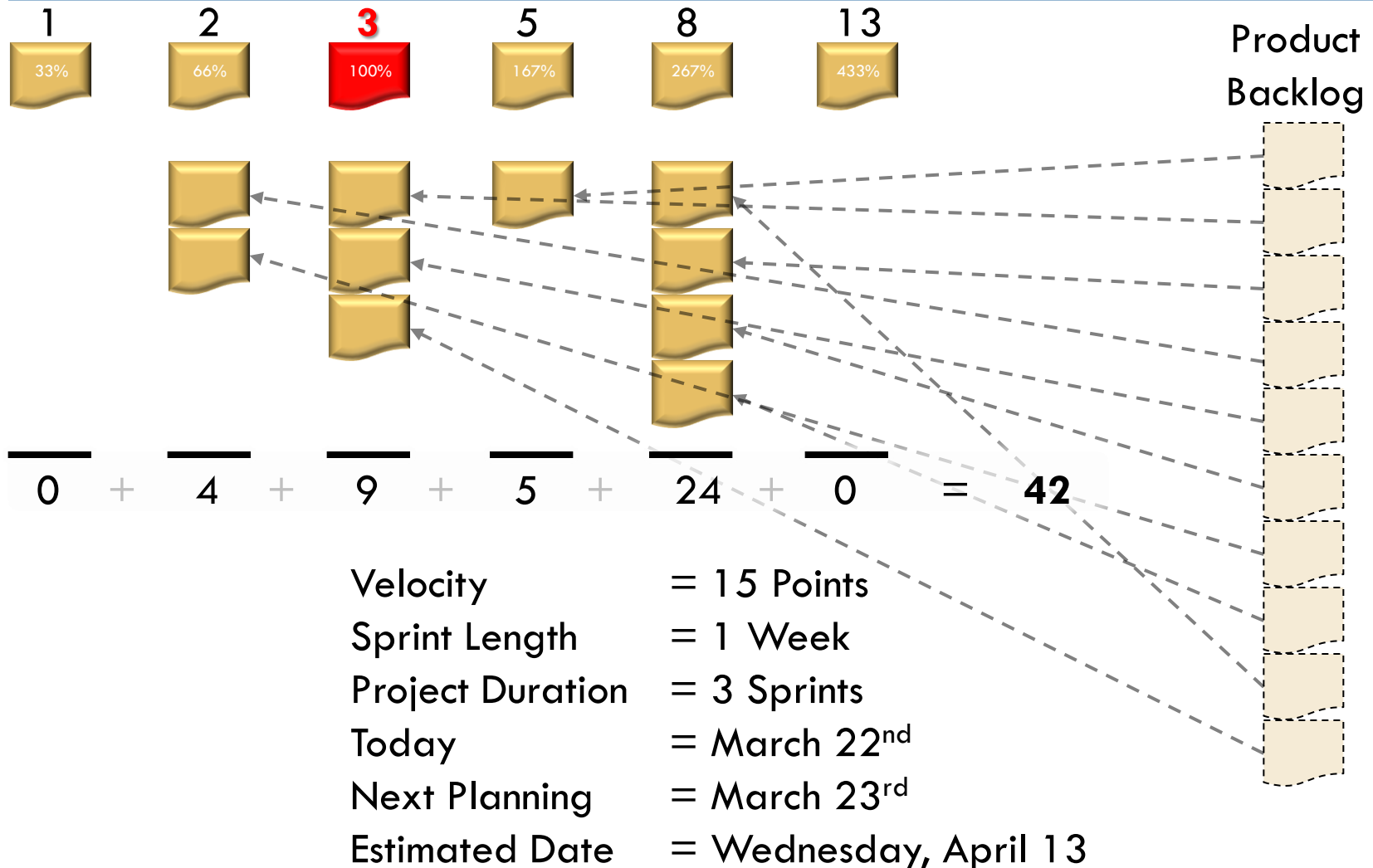
Consistency = Predictability

Step 3: The **FIRST SPRINT ONLY**, The Scrum Master interviews the Team, captures the context for the "Easiest" card is easier than the others and assigns it a Story Point estimate. The Scrum Master _**never again**_ votes on complexity or even enters the debate.
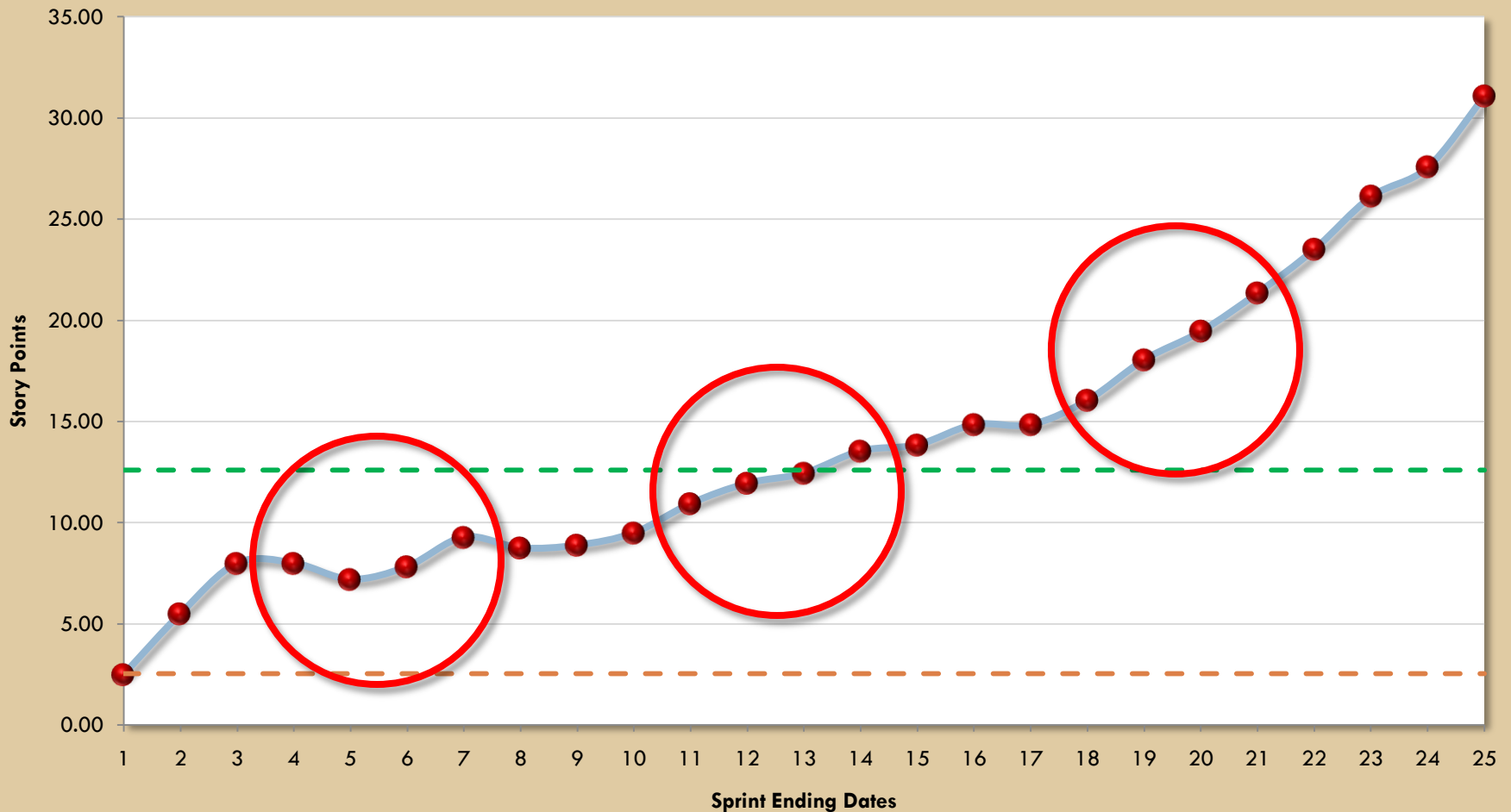
Consistency = Predictability
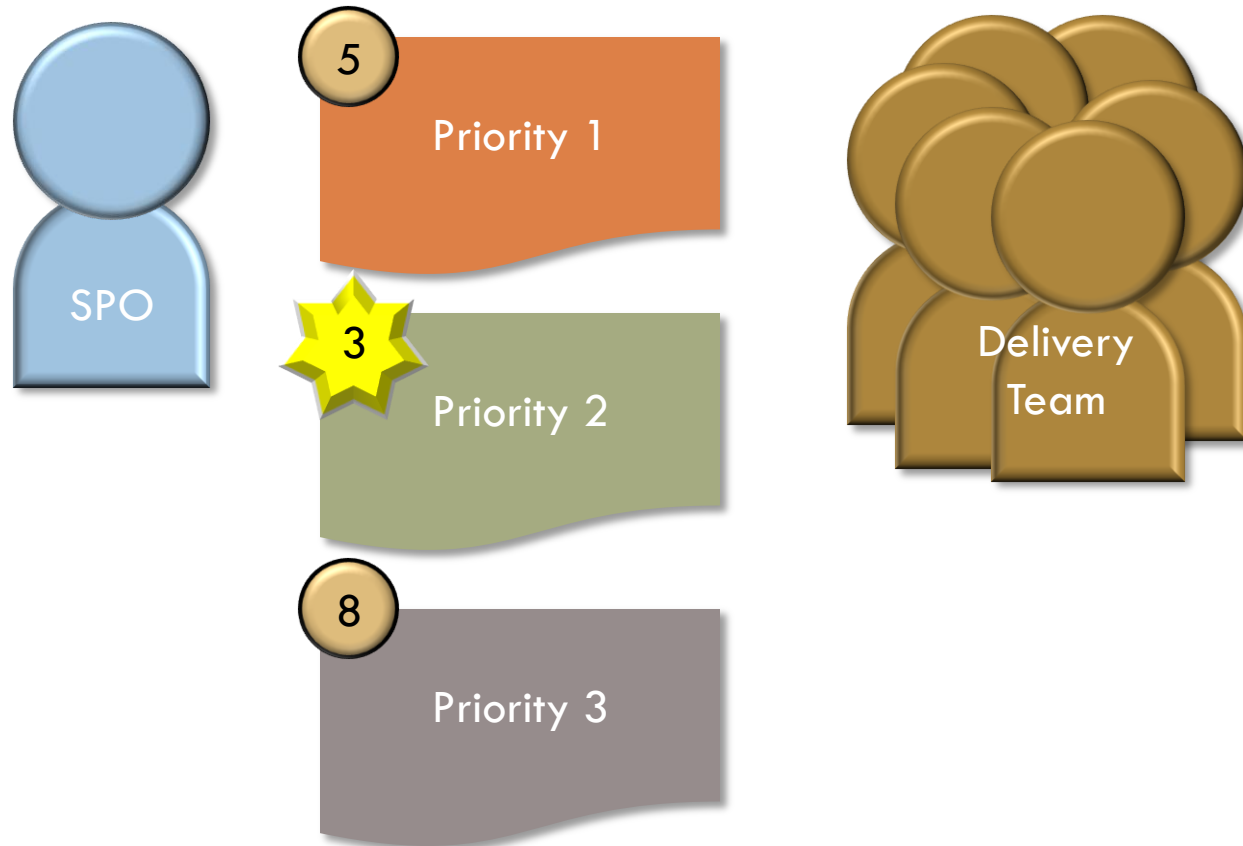
Step 4: The Product Backlog, now reordered by Priority, is comparatively estimated based on the Team's knowledge that the easiest card's value has now been set. In this example, the 3 point card becomes the Team's Keystone Card and is the foundation of comparison for all future estimates.

Consistency = Predictability

1	2	3	5	8	13
33%	66%	100%	167%	267%	433%

Product Backlog

0 + 4 + 9 + 5 + 24 + 0 = **42**

Velocity	= 15 Points
Sprint Length	= 1 Week
Project Duration	= 3 Sprints
Today	= March 22nd
Next Planning	= March 23rd
Estimated Date	= Wednesday, April 13

Consistency = Predictability

[*Unnamed MySpace Team's*] Velocity Chart

Conclusion

Velocity, based in Story Points, provides not only better predictability than hours but also a natural unit of growth for improving Teams.