

# PL22018 – To The Moon! Launching PLM/PDM Projects and Adoption in Your Company.

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# Class summary

Sun Tzu posits, “Every battle is won or lost before it’s ever fought.” When it comes to product lifecycle management and product data management (PLM/PDM) adoption in your company, no truer words have ever been spoken. Setting the executive stage, preparing and scoping the project(s), and defining key adoption milestones and criteria are crucial components to transforming your organization into a global manufacturing juggernaut. Experts from Autodesk, Inc., will teach you how to approach the definition, scoping, estimating, and adoption of PLM/PDM processes in your organization. Take a behind-the-scenes tour of how Autodesk Global Services approaches helping you get there with Fusion Lifecycle software, Vault software, and our many authoring tools. Your competitors are all chasing “design anywhere, build everywhere.” We’re here to help you get there first!

# Key learning objectives

At the end of this class, you will be able to:

- Understand the key milestones in adoption of PLM/PDM
- Gain a framework to build out your company's adoption of PLM/PDM
- Learn how and where to best engage professional partners and expertise
- Gain the knowledge to estimate the effort and scope in adopting Fusion Lifecycle

# The Presenter...

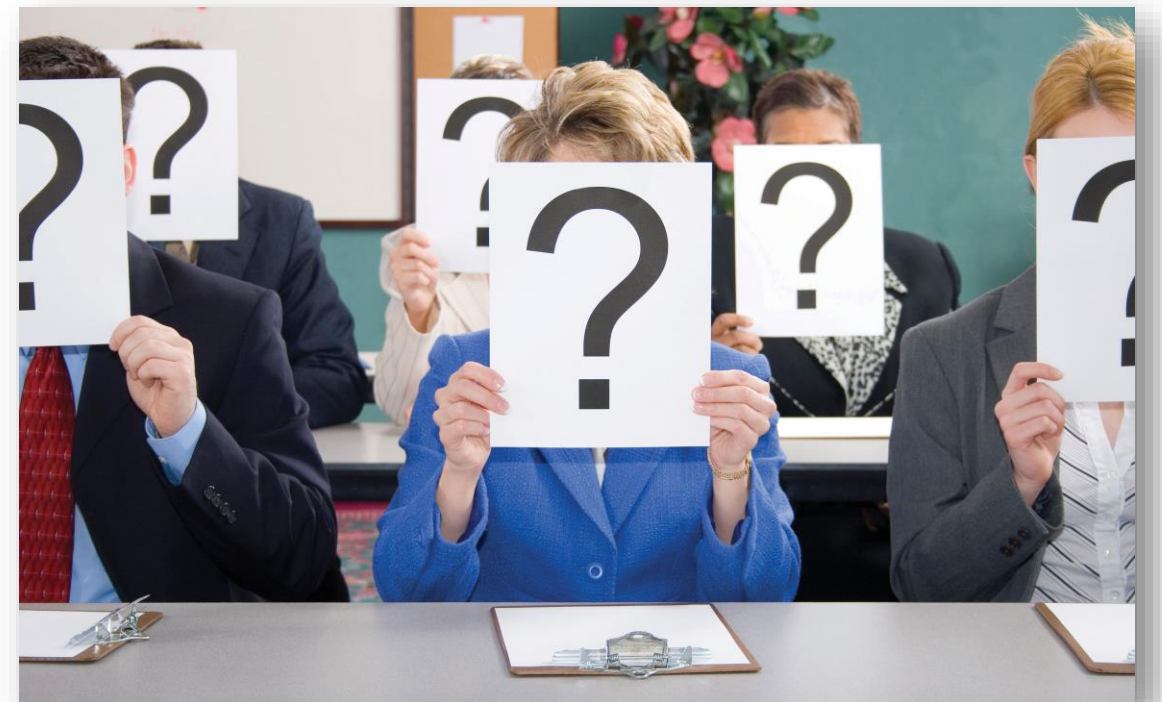
- Autodesk Consulting
- Solution Architect
- 10+ implementing PLM
- Aircraft Carriers to Toasters
- Avid golf, diving, Jaguar, and home theater automation enthusiast



Chris on a recent trip to Dubrovnik, Croatia (a.k.a King's Landing)

# The Audience...

- ADISK? Customer? Partner?
- Sales? Engineering? IT?
- Have PLM? Have FLC?
- PLM Leader? Contributor?



# A quick disclaimer...

- The Fusion platform has many potential uses.
- This presentation is not intended to restrict those use-cases.
- It is intended to highlight PLM/PDM project guidance.
- Some or all of this presentation may not be applicable if you are trying to accomplish something other than PLM with Fusion...

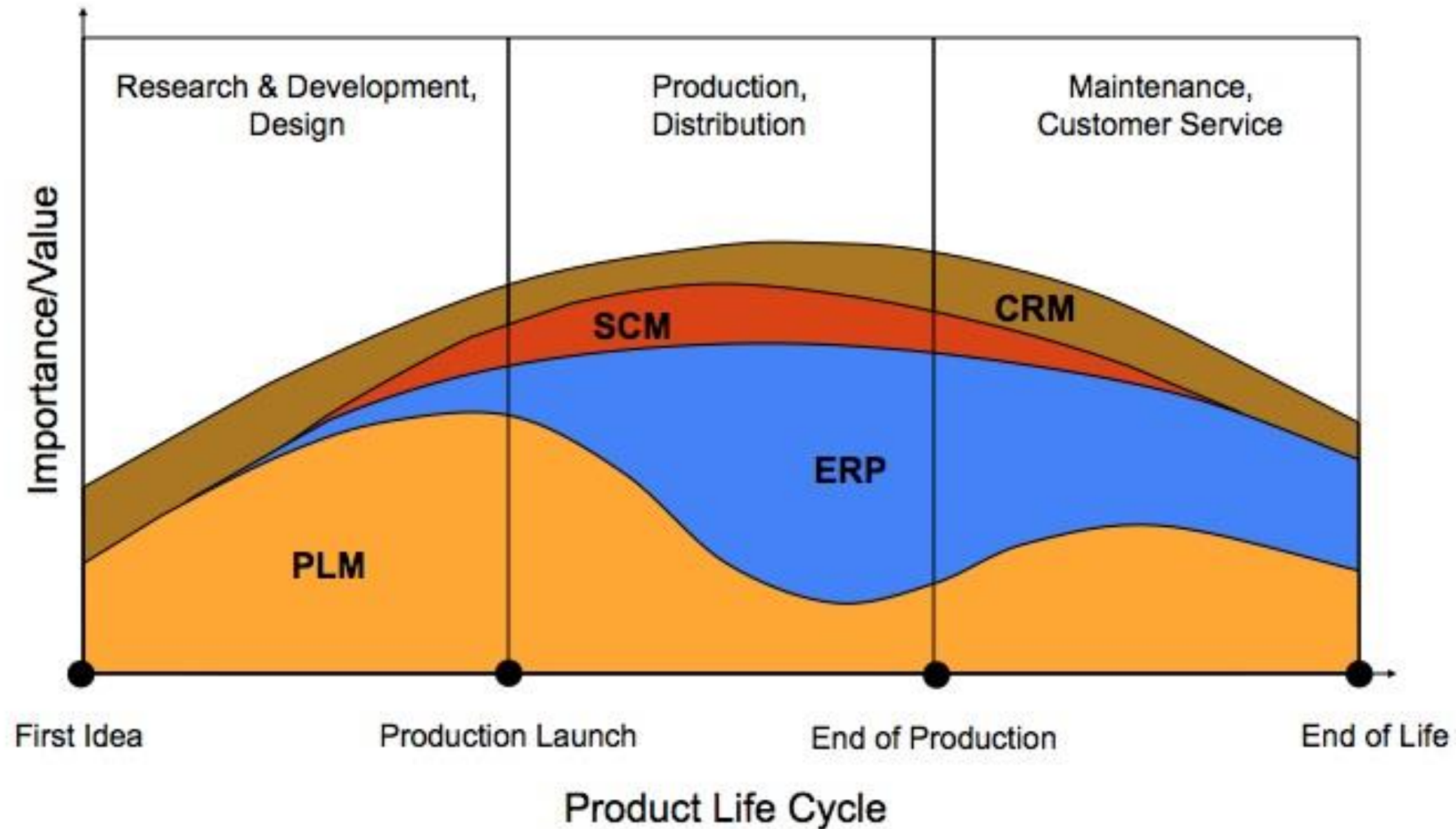
**So you've decided you want some PLM?**



# Are you sure it's PLM you need?

- ✓ Virtual Product Development
  - ⊘ Physical Product Development (ERP)
- ✓ Requirements & Portfolio Management
  - ⊘ Orders or Service Forecasting (CRM)
- ✓ Supplier Design Collaboration
  - ⊘ Supplier Logistics (SCM)
- ✓ Manufacturing Design
  - ⊘ Manufacturing Management (MES)
- ✓ Product Design Quality Management
  - ⊘ Returns & Customer Satisfaction Management (CRM)

# Enterprise System Landscape



Source: PLM Technology Guide

# Have you identified your goals?

- ☐ Increase product quality
- ☐ Manage increased product complexity
- ☐ Reduce product unit cost
- ☐ Reduce time-to-market
- ☐ Reduce change-related admin overhead
- ☐ Reduce production rework & inventory scrap
- ☐ Plug gaps in current business processes
- ☐ Enhance cooperation with your supply chain



# Have you measured your goals today?

- Comparing before and after can be a key value realization method.

<b>Goal</b>	<i>Reduce Product Unit Cost</i>
<b>PLM Value</b>	Encourage part re-use and thereby increase part purchase volumes attaining better discounts
<b>Measurement</b>	Track the quantity of new part numbers that are issued for each product

More good examples here: <http://www.product-lifecycle-management.com/plm-objectives.htm>

- An Autodesk SE or CSM can help you understand these values in your specific business context

# Do you understand the initial cost?

**TCI = \$4,000 - \$6,000 per user**

*TCI = Total Cost of Implementation. Source: PLM Technology Guide*

# Do you understand the initial cost?

- Fusion Lifecycle tries to be on the lower end of this:
  - No hardware cost
  - No capital investment in software (subscription based)
  - Agile implementation methodology can break up functionality over periods of time.

# Have you defined your requirements?

- Requirements for your business exist independently of the software solution.
- Requirements should be used during the RFI/RFP process to evaluate software solutions.
- Great examples exist out there of PLM requirements that you can tailor...



# PLM Technology Guide's Generic Requirements



## PLM Technology Guide

Version 3.0, © PLM Technology Guide

### PLM Capability and Requirements Matrix

See Vendor Instructions Tab on How to Complete Matrix

		System 1								
ID	Capability Area/Requirement	Maturity	Priority	OOTB	CONF	CUST	3PTY	PLAN	N/A	Vendor Explanation/Details
<b>1</b>	<b>Foundational Capabilities (PDM)</b>									
1.1	Document/File Management									
1.1.1	General									
1.1.1.1	Unlimited number of documents/files			2						
1.1.1.2	Unlimited number of company-specific document/file types				2					
1.1.1.3	Company-specific number format for each document/file type				2					
1.1.1.4	Company-specific forms for each document/file type					2				
1.1.1.5	Unlimited number of company-specific attributes for each document/file type				2					
1.1.1.6	Company-specific format for all document/file attribute fields				2					
1.1.1.7	Unlimited number of company-specific document/file release statuses				2					
1.1.1.8	Document/file effectivity							2		
1.1.2	← Show/Hide General Revisions									
1.1.2.1	Unlimited number of revisions per documents/files			2						
1.1.2.2	Customer-specific revision format for each document/file type				2					
1.1.2.3	Company-specific forms for each document/file revision					2				
1.1.2.4	Unlimited number of company-specific attributes for each document/file revision				2					
1.1.2.5	Company-specific format for all document/file revision attribute fields				2					
1.1.2.6	Unlimited number of company-specific document/file revision release statuses				1					The system only allows the definition of 5 different release statuses
1.1.2.7	Support of major and minor revisions with independent revision schemas								1	The system does not support minor revisions
1.1.2.8	Document/file revision effectivity							2		
1.1.3	← Show/Hide Revisions Versions									
1.1.3.1	Unlimited number of document and file versions			2						
1.1.3.2	Specifiable version limit			2						
1.1.3.3	Automatic creation of the next version when saving a document/file			2						
1.1.3.4	Automatic assignment of the next version number when saving a document/file			2						
1.1.3.5	Preservation of previous document/file versions up to the specified version limit			2						
1.1.3.6	Access to previous document/file versions based on defined access rules			2						
1.1.3.7	Automatic deletion of document/file versions that exceed the version limit			2						
1.1.4	← Show/Hide Versions Handling									
1.1.4.1	Storage of documents/files in a secure application vault that is not accessible via file system			2						
1.1.4.2	Automatic assignment of the next logical unique document/file number at the time of creation			2						

Available Here: [http://plmtechnologyguide.com/site/?page\\_id=37](http://plmtechnologyguide.com/site/?page_id=37)



# Got it ready?

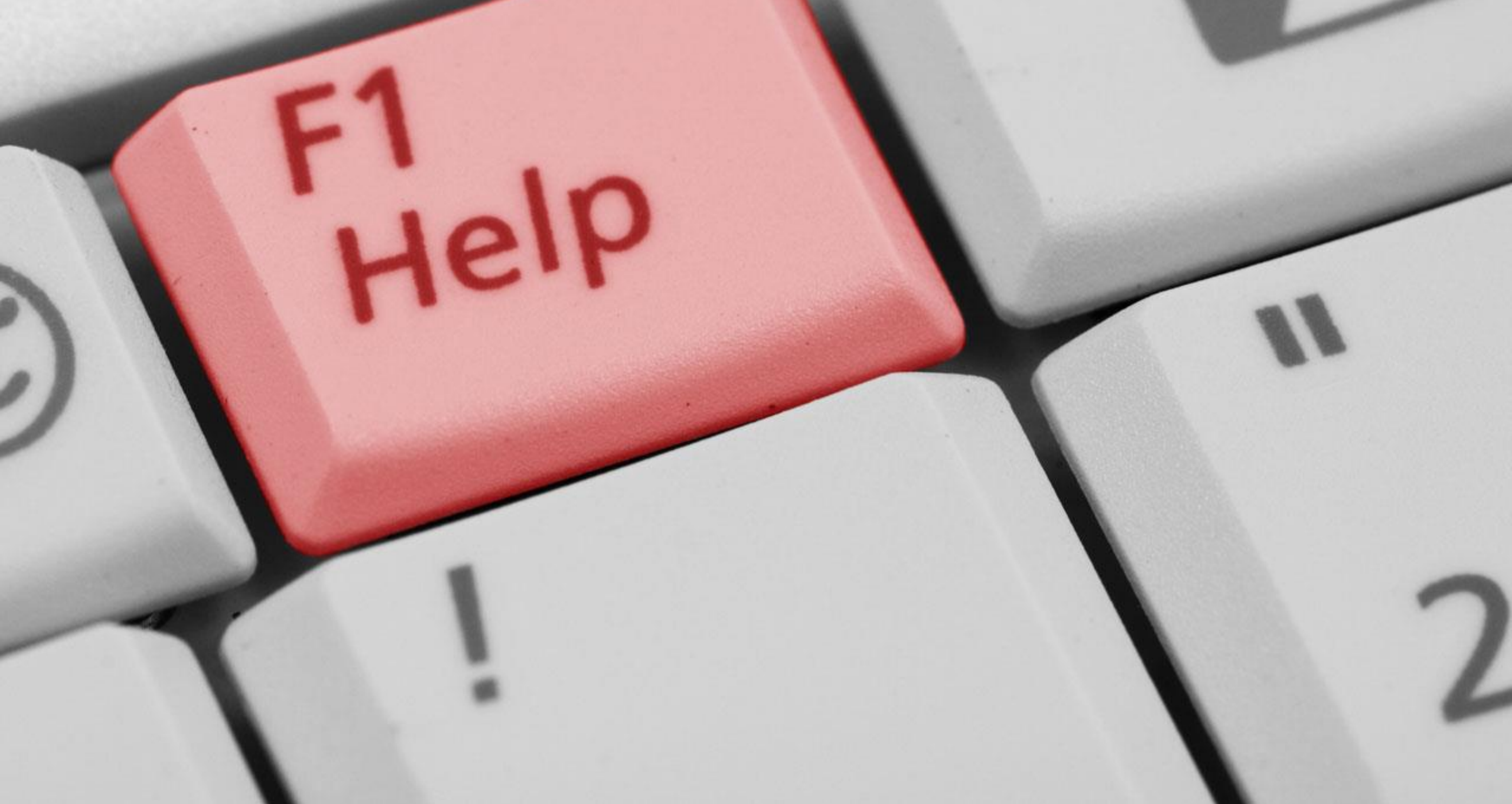
- ☐ I am choosing the right business system
- ☐ I have my PLM business goals
- ☐ I have measured the current state of my business
- ☐ I understand the generic costs of PLM
- ☐ I have my initial requirements defined



**So you're ready to start your PLM build?**



**KEEP  
CALM  
AND  
JUST  
WAIT**



## Find a partner ... or two

- If you haven't implemented PLM before...
  - Seek the aid of a PLM consulting organization.
- You've likely never implemented FLC before...
  - Seek the aid of a technical consulting organization.

...Ideally they aren't the same organization...

# PLM Consulting Organizations

- Some Examples:

**Deloitte.**

**CIMdata<sup>®</sup>**

plwworks

**KALYPSO**

**Infosys<sup>®</sup>**

...Or one of many others out there...

# Technical Consulting Organizations

- Autodesk Specialized Partners
  - Have FLC Certified personnel on staff with extensive training in implementing FLC.



Or of course...



# Why Consulting?

- “How can we get up to speed... **faster?**”
- “How do we **integrate** with our other systems?”
- “Our staff doesn’t have the **bandwidth** to do it ourselves.”
- “Where is the best place for us to **start** with FLC?”
- “What’s the **best way** to setup FLC to meet our requirements?”
- “How do we **migrate** our legacy data into our new solutions?”
- “How do we become **self-sufficient** on FLC?”



[www.autodeskfusionlifecycle.com](http://www.autodeskfusionlifecycle.com)

WHAT IS PLM?

CAPABILITIES

CUSTOMERS

EVENTS

COMMUNITY

PRICING

FREE TRIAL

# Autodesk Fusion Lifecycle

Next Generation Cloud-based Product Lifecycle Management

DISCOVER IT NOW >

# Invest in the Pre-Contract Phase...

- Work with sales to understand what's possible.
  - Is OOTB really what you need? Get a demo!
- Have an onsite scoping/alignment session.
- Understand your as-is processes vs. ideal processes... Dream a little!
- Prep for some organizational change management.
- Define the contract roadmap and milestones.
- Talk to some other customers.

# Speaking of talking to other customers...

- PL21346 – Living the Lifestyle of Lifecycle: Setting Yourself up for Success with Fusion Lifecycle
  - Katelyn Wilson
  - Kelley Wilkerson
- Today: 4:45 – 5:45pm



# Build a project estimate...



# Estimating Methods...

1. Expert Judgement
2. Comparative or Analogous Estimation
3. Top-Down
4. Bottom-Up
5. Parametric Model

Source: <https://www.liquidplanner.com/blog/5-methods-of-project-estimation/>



# Estimating: Expert Judgement

- Talk to some experts
- Convey what you need
- Get some numbers



Source: butchbellah.com

# Estimating: Comparative or Analogous Estimation

- If similar to past projects
- Compare ideas and scope
- Ballpark a number



Source: supplycs.com

# Estimating: Top Down

- High Level WBS
- Effort by WBS
- Summarize for a number



Implementation

Integration

Go Live



Strategy & Planning

Data Migration

Training

Optimization

# Estimating: Bottom Up

- Engage expertise to map out the design.
- Estimate individual line items.
- Sum up the line items for a number.



# Estimating: Parametric Model

- Use detailed, actual data from previous implementations.
- Build estimate from these numbers.



# Estimating Methods...

- ~~1. Expert Judgement~~
- ~~2. Comparative or Analogous Estimation~~
3. Top-Down
4. Bottom-Up
- ~~5. Parametric Model~~

Source: <https://www.liquidplanner.com/blog/5-methods-of-project-estimation/>





**Let's get this project started...**





**NOW  
PANIC  
AND  
FREAK  
OUT**

**Just kidding... But seriously...**

# “Learning over Education”

- Joi Ito, MIT Media Lab

[www.autodeskfusionlifecycle.com](http://www.autodeskfusionlifecycle.com)

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# Autodesk Fusion Lifecycle

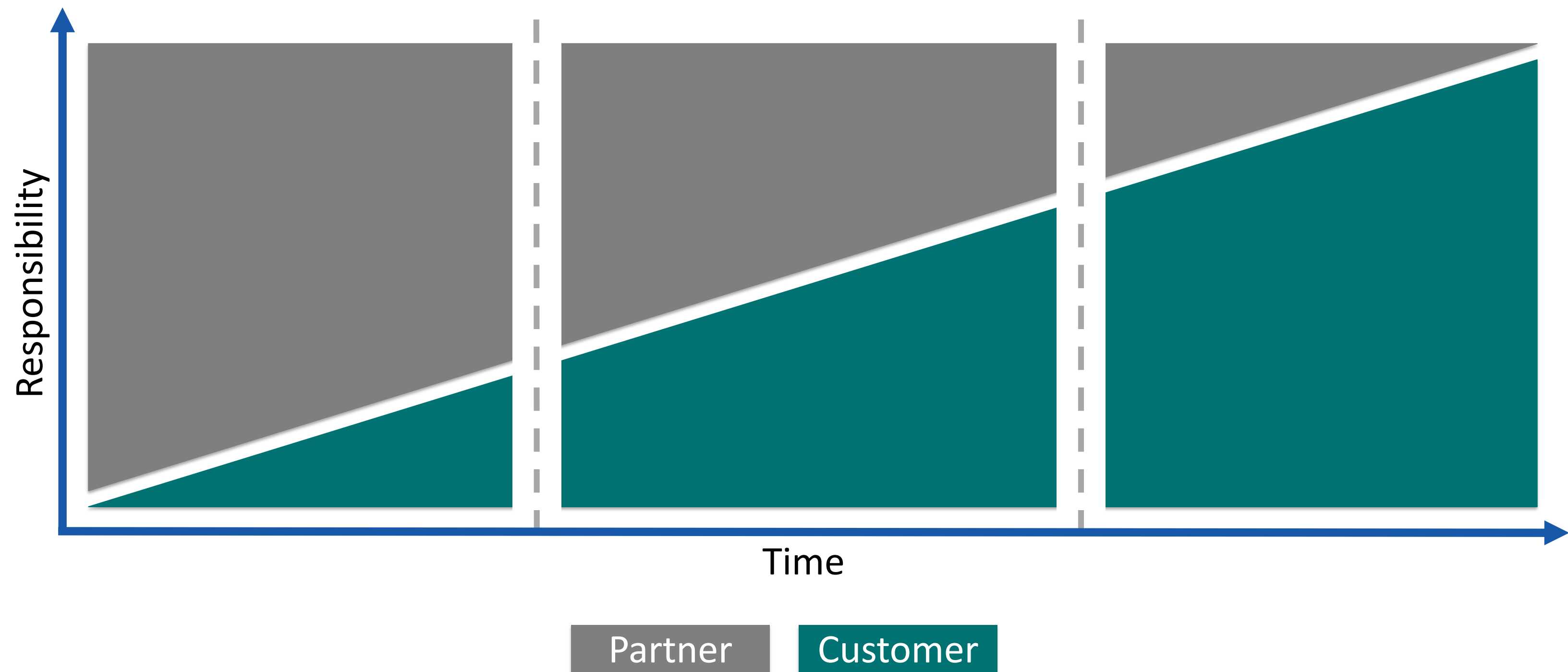
Next Generation Cloud-based Product Lifecycle Management

DISCOVER IT NOW >

# But some education can kick-start learning...

- Product Capability Overviews
  - Great at the beginning of a project or epic to get everyone using the same lexicon and understanding the boundaries
- Admin Training
  - Great during implementation to help administrators take more ownership of configurations
- User Training
  - Best just before UAT to tailor appropriately and enable user interactions
- Refresher Training
  - Good to expose new functionalities, new processes as they go live, and re-inform occasional users about the system

# Self-sufficiency is the goal



[www.autodeskfusionlifecycle.com](http://www.autodeskfusionlifecycle.com)

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# Autodesk Fusion Lifecycle

Next Generation Cloud-based Product Lifecycle Management

DISCOVER IT NOW >

# “Pull over Push”

- Joi Ito, MIT Media Lab

# Building a Team is always better...

- A diverse team will bring higher quality results.
- A diverse team will have a more vested stake in broad adoption.
- A diverse team will bubble up ideas and quick wins to realize value faster.

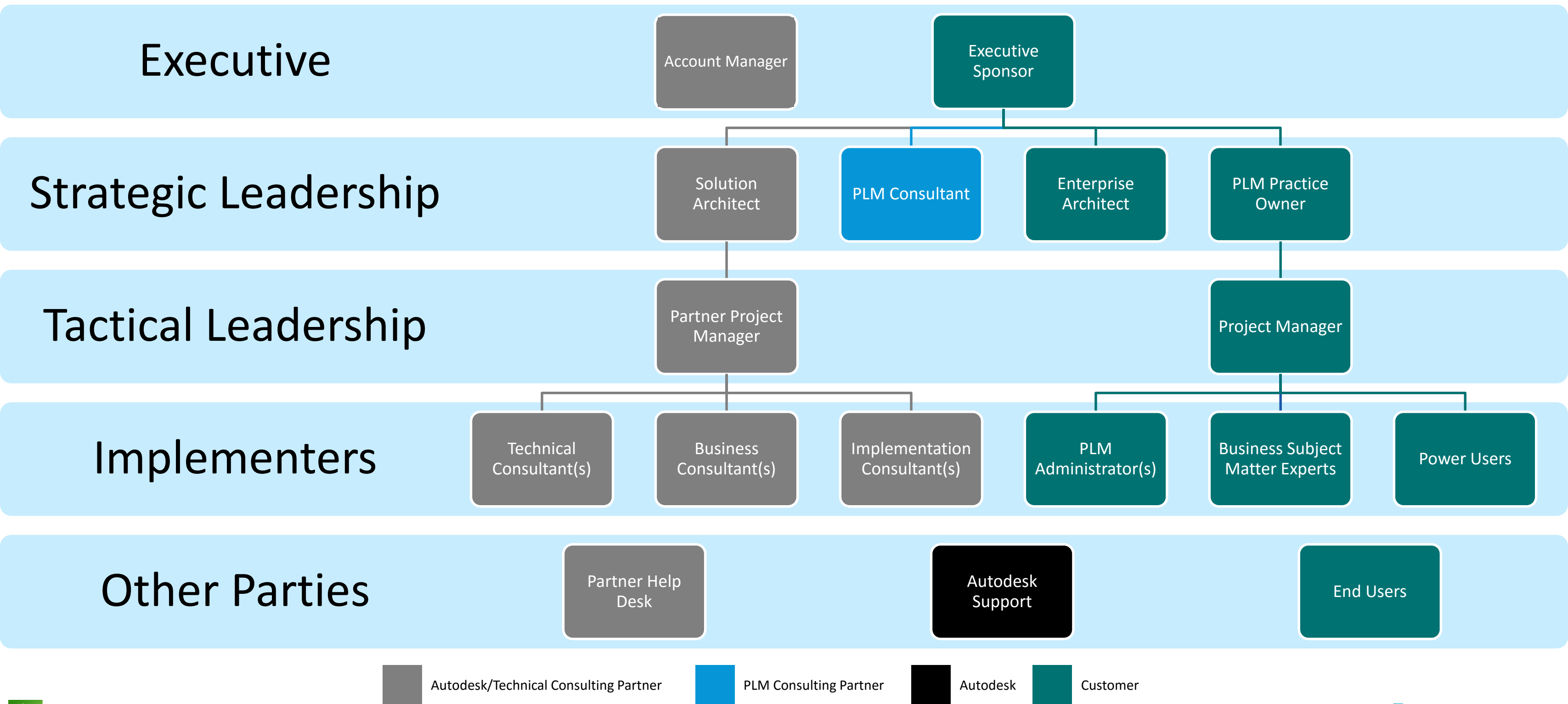
# Speaking of Quick Wins...

- ✓ Issue Tracking
- ✓ Problem Reporting
- ✓ Change Requests
- ✓ Defect Tracking
- ⊘ NPDI
- ⊘ BOM Change Management
- ⊘ Supplier Collaboration
- ⊘ Portfolio Management



- PL21651 – Picking the Low-Hanging Fruits to Drive Early Adoption
  - Saoirse Colgan & Brian Schanen

# A bit more about teams...



**“In God we trust; all others bring data”**

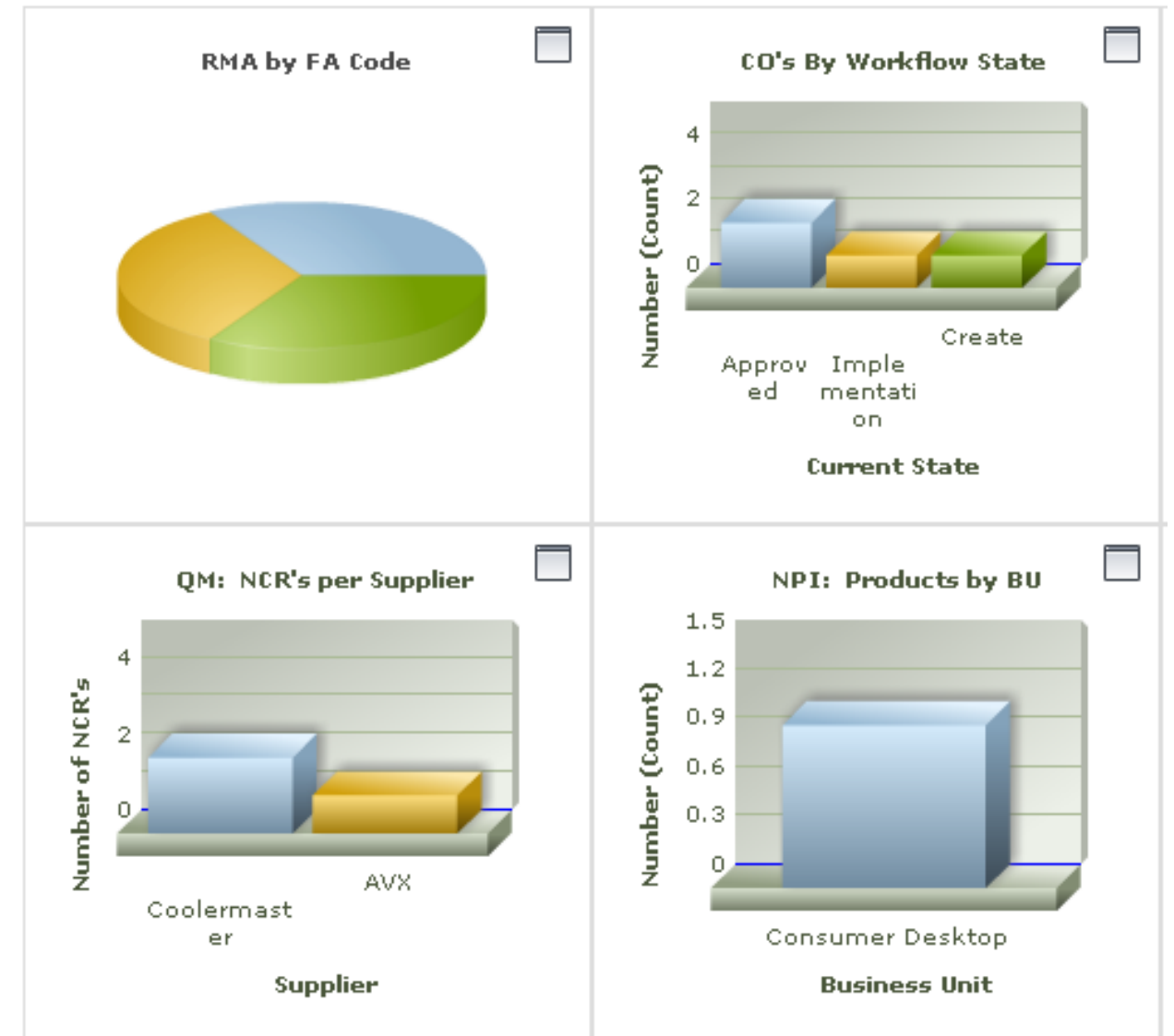
**- W. Edwards Deming**

# People often ask where to begin with PLM...

**Remember:** “The goal is to transform data into information, and information into insight.” – Carly Fiorina, HP

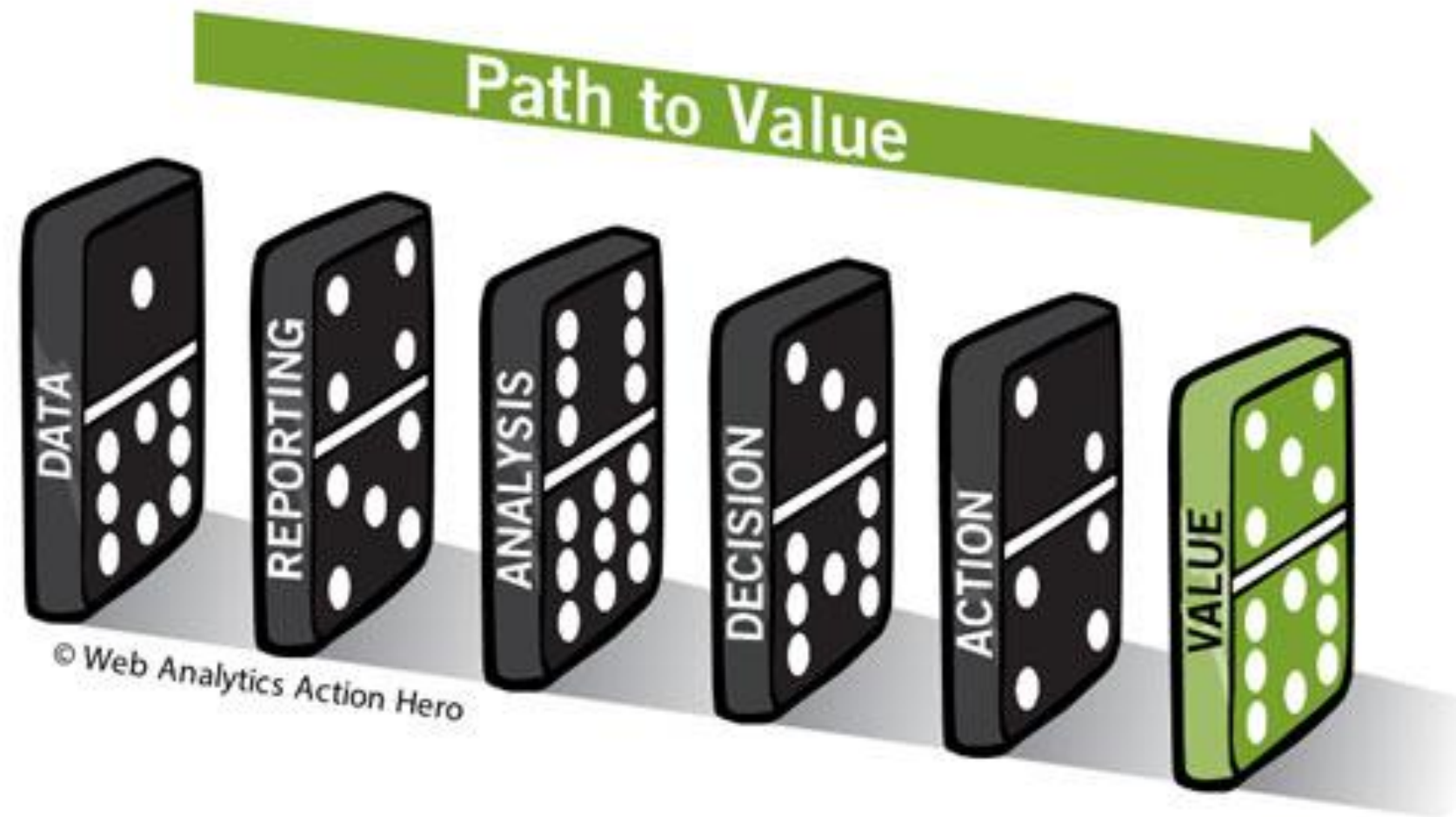
**If:** “Fusion Lifecycle is the ear to my business.” – Brian Hunter, Novacentrix

**Then:** Reporting is FLC’s “voice”



# Define Reporting Early...

- Reporting is the second step to achieving value.
- Knowing the reports you need, is often the best way to understand the meta-data you should capture.
- Managers love pretty pictures.



# Speaking of Reporting...

- PL18417 - What Gets Measured Gets Managed - Reporting with Fusion Lifecycle
  - Tyler Beck
- PL20911 - Dashboard, Smashboard - Vault Reporting on Steroids
  - Tim Bourdois – Today: 4:45-5:45pm

# **~~“Demo~~ Deploy or Die”**

**- Joi Ito, MIT Media Lab**

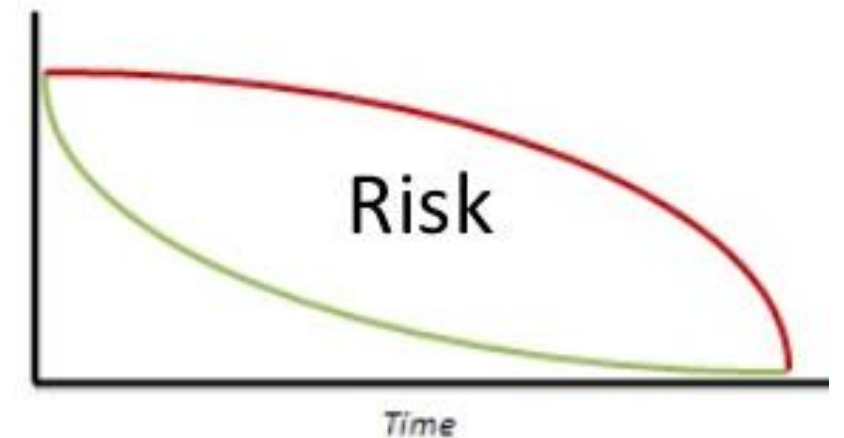
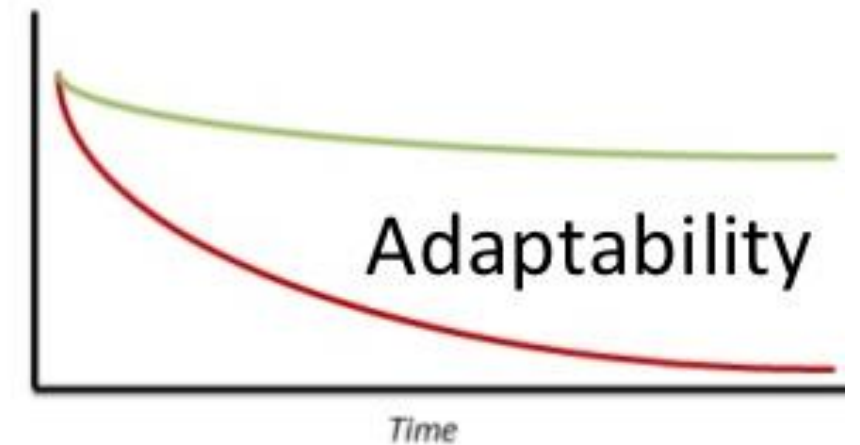
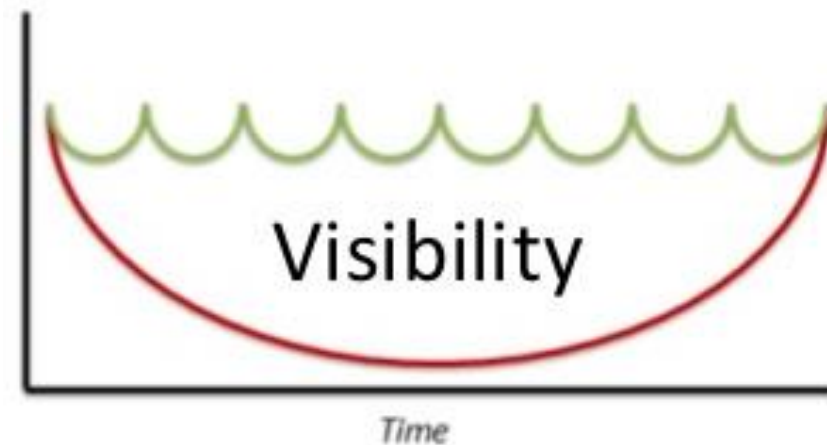
# PLM is inherently agile... and so is Fusion Lifecycle...



Agile

# Why Autodesk Prefers Agile for FLC?

- Fail Faster!
- I'll know it, when I see it!
- Less up front discovery
- Focus on getting to Production
- Gets users in FLC faster



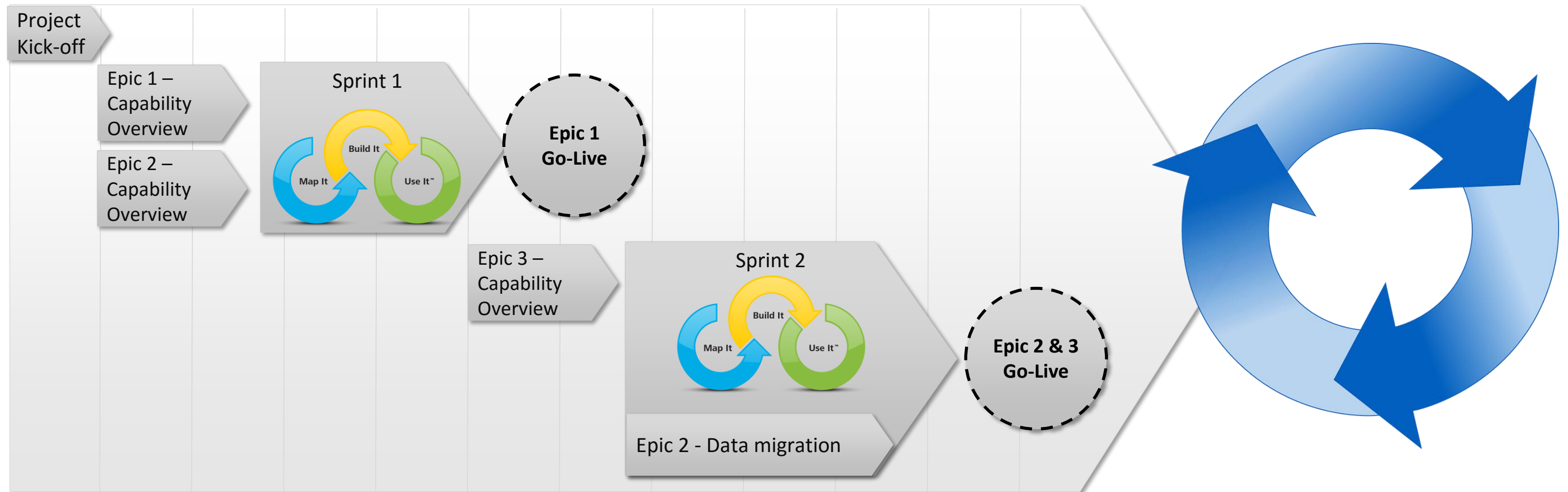
— Agile — Waterfall

# Major Components of PLM...

- Document/File Management
- Part/Material Management
- BOM Management
- Configuration Management
- Classification Management
- Workflow Management
- Change Management
- Portfolio Management
- Quality Management
- Requirements Management
- Mfg. Process Management
- Supply Chain Collaboration
- Visualization & Markup
- Reporting & Analytics
- Ideation
- New Product Introduction (NPI)

...Wouldn't it be nice if someone gave me some Epics?...

# Agile implementation looks like...



...but when does it end?...

# But when does it end?

“Facing a sea of infinity, it’s easy to despair, sure that you will never reach dry land, never have the sense of accomplishment of saying, “I’m done.” At the same time, to be finished, done, complete – this is a bit like being **dead**. The silence and the feeling that ‘maybe that’s all.’

... the challenge is... to be comfortable with the undone, with the cycle of never-ending... Today, we’re never finished, and that’s **okay**.”

- Seth Godin



# Q & A

# How did I do?

- Your class feedback is critical. Fill out a **class survey** now.
- Use the AU mobile app or fill out a class survey online.
- Give feedback after each session.
- AU speakers will get feedback in real-time.
- **Your feedback results in better classes and a better AU experience.**



# More Questions? Visit the AU Answer Bar

- Seek answers to all of your technical product questions by visiting the **Answer Bar**.
- Open daily from **8am-6pm Tuesday** and **Wednesday**, **4:30pm Thursday**.
- Located outside **Hall C, Level 2**.
- Meet Autodesk developers, testers, & support engineers ready to help with your most challenging technical questions.



