



Project Management at Cisco

An Agile Transformation Journey

Ben Rus

TIM 101 Seminar – Fall 2015

11/5/15



Ben Rus

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- Scrum Master – Cisco, 2009 – present
 - Scrum Master for 2 scrum teams in Advanced Services Portfolio
 - Lead role in Cisco Services Technology Group Agile Transformation Initiative
- B.S. Information Systems Management, UCSC, 2009
 - Focus on Software Development and Network Administration



Agenda

- About Cisco
- Cisco Services Technology Group
- Project Management
- Agile @ Cisco
- Project Management As A Career
- Q & A



Cisco

Past, Present and Future

Two Cables and a Desire to Connect



Intelligent Connections at the Heart of Cisco

Connectivity

Digitize Access to Information

- Email
- Web Browser
- Search

Networked Economy

Digitize Business Process

- E-commerce
- Digital Supply Chain
- Collaboration

Immersive Experiences

Digitize Interactions
(Business & Social)

- Social
- Mobility
- Cloud
- Video

Internet of Everything

Digitize the World

Connecting:

- People
- Process
- Data
- Things

Intelligent Connections

The Internet of Everything



People



Process



Things



Data

FY15 Financials

**Revenue:
\$49.2B,
4% Y-Y Growth**

**Cash on Hand:
\$50+B**

**Services
Revenue:
\$11.4B**

**Product
Revenue:
\$37.8B**

Cisco's R&D Commitment

We Build the Solutions You Need to Succeed



\$6.3B in R&D spend

12.8% of FY15 revenue

19,000+ patents

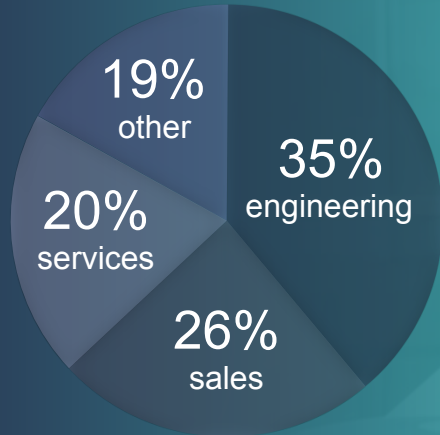
170 labs around the world

25,000 engineers

Build – Buy – Partner – Integrate

culture employees

...are our competitive advantage



71K+
employees

165+
countries

380+
offices

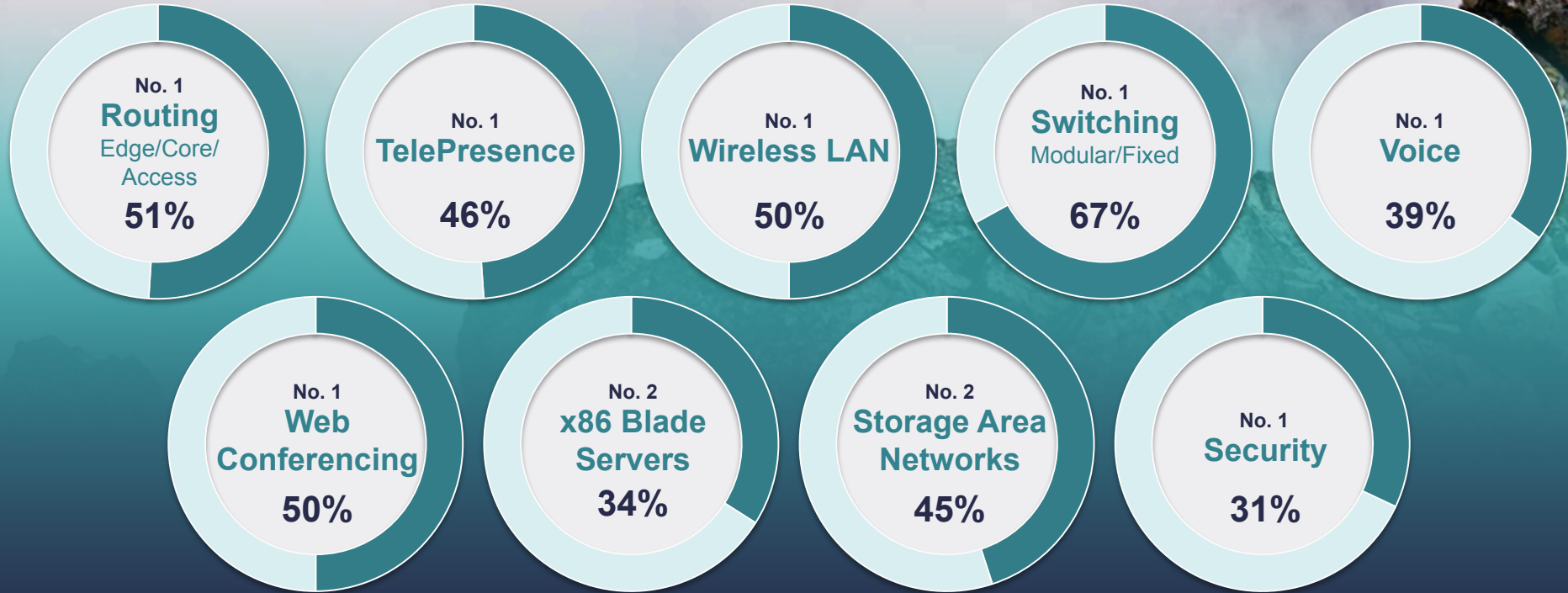


Acquisitions: An Extension of Cisco's Innovation Engine

Nearly 170 Across Architectures

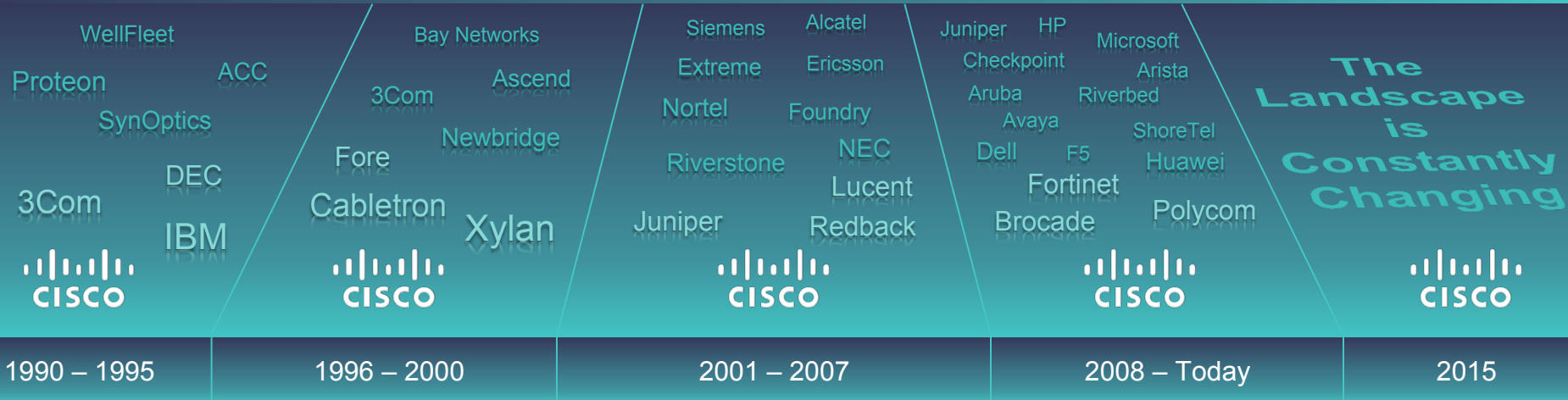


Market Leadership Matters



Leading for Nearly 30 Years

Internet of Everything



1990 – 1995

1996 – 2000

2001 – 2007

2008 – Today

2015

Cisco Services Technology Group - CSTG

Cisco Services Technology Group (CSTG)

- Services generates over 20% of Cisco's revenue
- CSTG supports the Services Org
- ~1200 people:
 - 6 Major Sites: San Jose, Austin, RTP, Bangalore, Chennai, Pune
 - 3 Primary Functions: Engineering, Support, Operations
- ~50 active projects
- 2.5 years into Agile Transformation Journey



Project Management

What is a Project?

- A project is defined as a temporary endeavor with a beginning and an end that is undertaken to create a unique product, service, or result.
- There are typically 3 main constraints for any given project
 - **Scope**: Refers to the work that needs to be accomplished to deliver a product, service, or result with the specified features and functions.
 - **Time**: Refers to the amount of time available to complete a project
 - **Resources**: Refers to the budgeted amount available for the project.
- Quality is often considered the 4th constraint
- **Note**: These constraints are typically referred to as the Project Management Triangle where each side represents a constraint. One constraint cannot be changed without affecting the others.

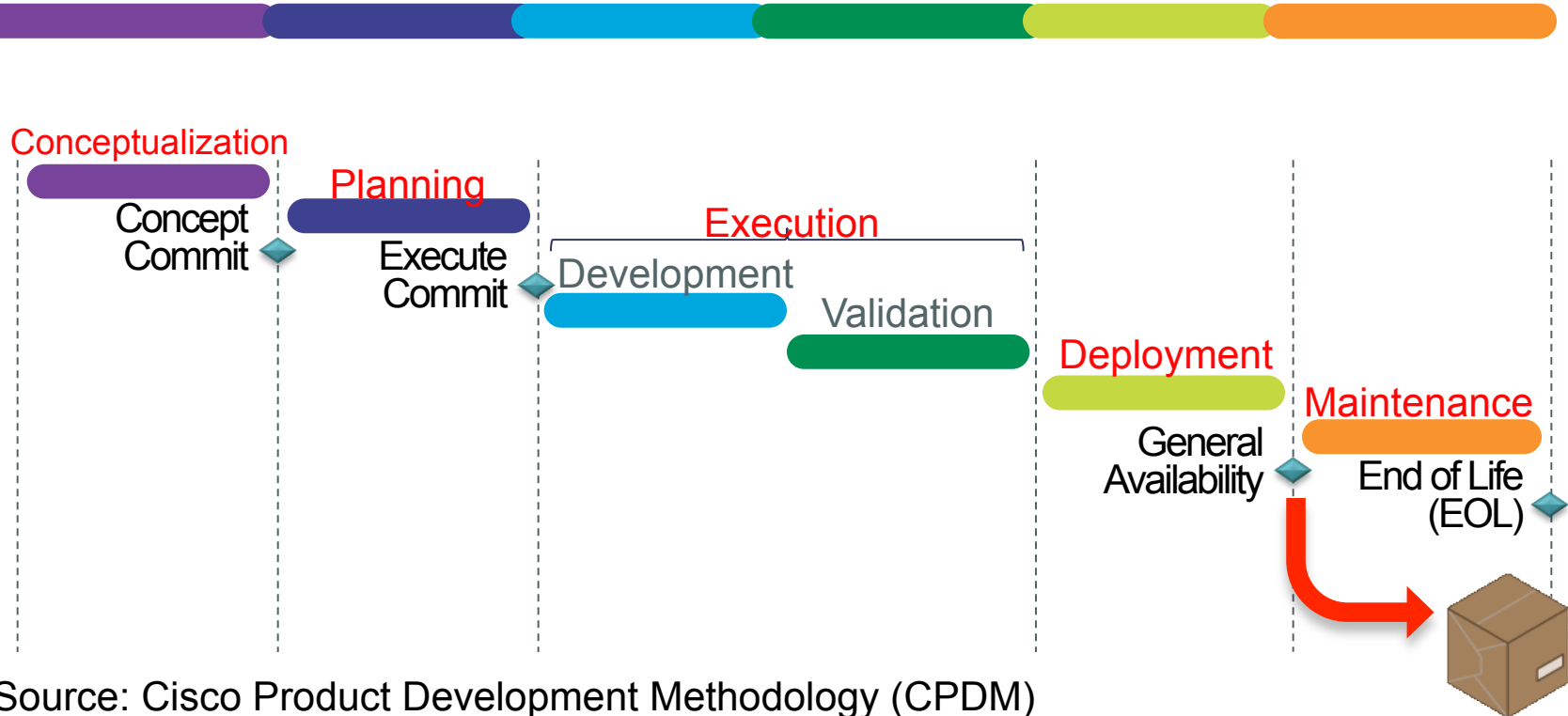
What is Project Management?

- Project management is a set of principles, practices, and techniques applied to drive projects from start to finish while coordinating the project's resources and controlling the risks and constraints.
- Two main methodologies:
 - Waterfall (Linear)
 - Agile (Iterative)

“The application of knowledge, skills, tools, and techniques to project activities to meet the project requirements.”

- Project Management Body of Knowledge (PMBOK) 4th Edition, Project Management Institute

Waterfall Process: Linear & Sequential



Source: Cisco Product Development Methodology (CPDM)

Typical Waterfall Roles

Project Manager

- Micro-Level Manager
- Responsible for managing and monitoring the day to day activities of project team from start to finish
- Accountable for success or failure of a project

Program Manager

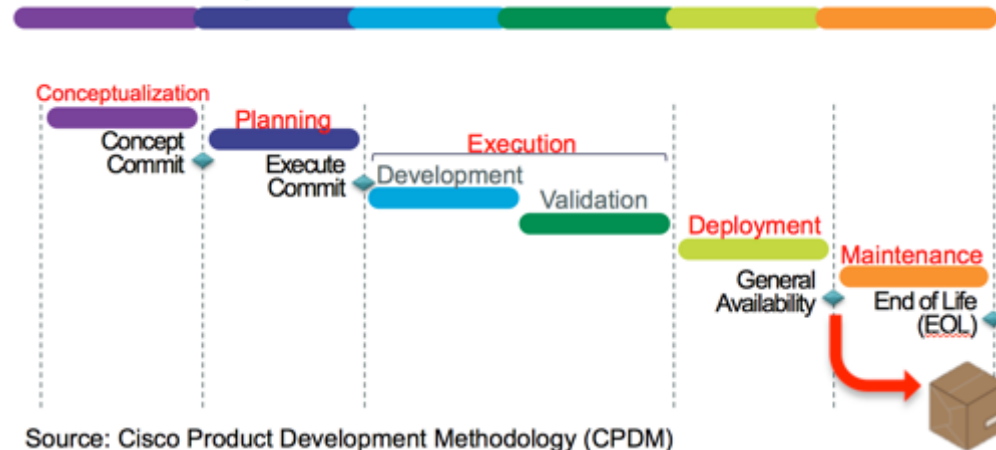
- Macro-Level Manager
- Responsible for managing a collection of projects that form a program
- Set overall direction for teams and future projects they will work on

Product Manager

- Work with end users/ customers to define detailed requirements
- Responsible for ensuring that the product meets the specifications

The Waterfall Process

- Plan Driven
- Fixed scope, variable resources and time
- Concept through Deployment phases can take years
- Any delays directly impact project schedule
- Minimal feedback loops
- Change is disruptive
- Slow learning



Example Waterfall Project

F35 Project Delayed By Software Problems

- \$143 Billion over budget
- Years late
- The cost of the Navy's F35C grew from \$273 million in 2014 to a wallet-busting \$337 million by 2015.



DEFENSE

How DOD's \$1.5 Trillion F-35 Broke the Air Force

David Francis
Thursday, 31 Jul 2014 | 8:35 AM ET

 THE FISCAL TIMES

The F-35 Joint Strike Fighter is the most expensive, and possibly the most error ridden, project in the history of the United States military. But DOD has sunk so much money into the F-35 — which is expected to cost \$1.5 trillion over the 55-year life of the program — that the Pentagon deemed it “too big to fail” in 2010.

Source: *Jeff Sutherland: Disruptive Leadership with Scrum*, 10/6/14 talk at Cisco

scruminc.@TEDxAix

The Industry Today

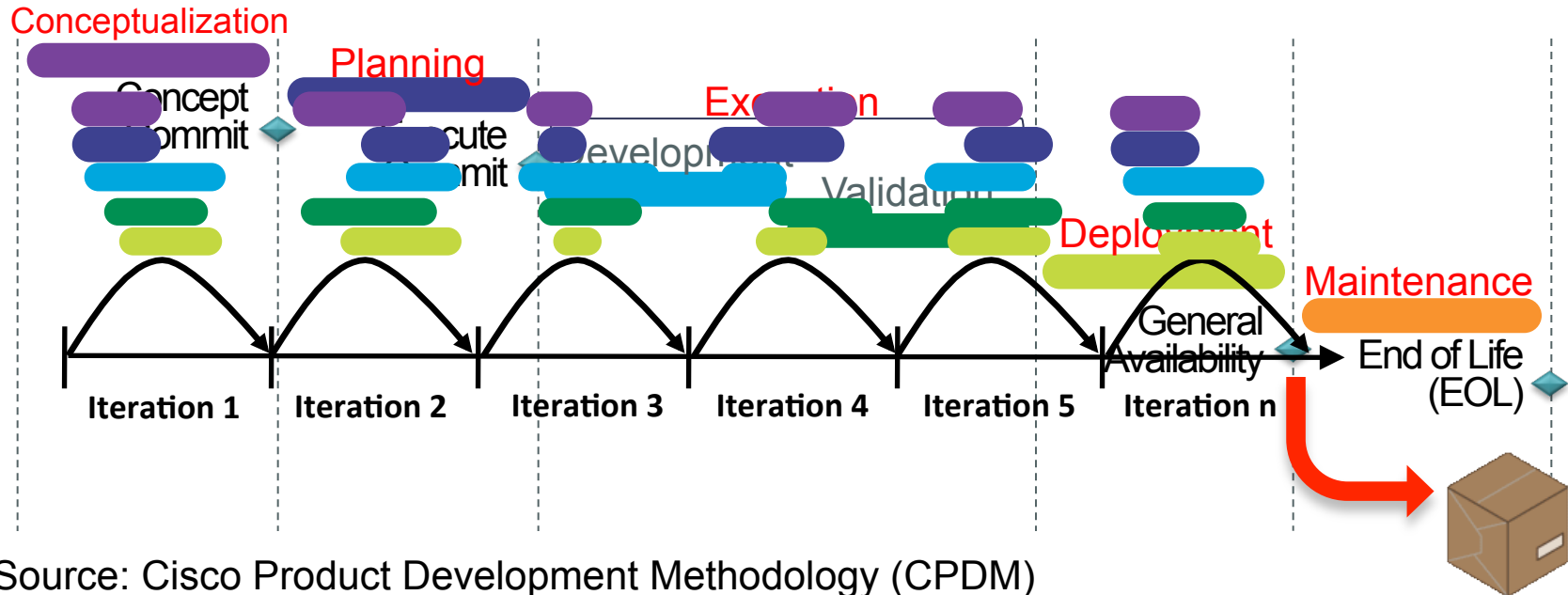
- Only 35% of projects are successful – On time, on budget, with requested features
- 19% of projects are outright failures
- 64% of features are never even used by the customer

We can do better...



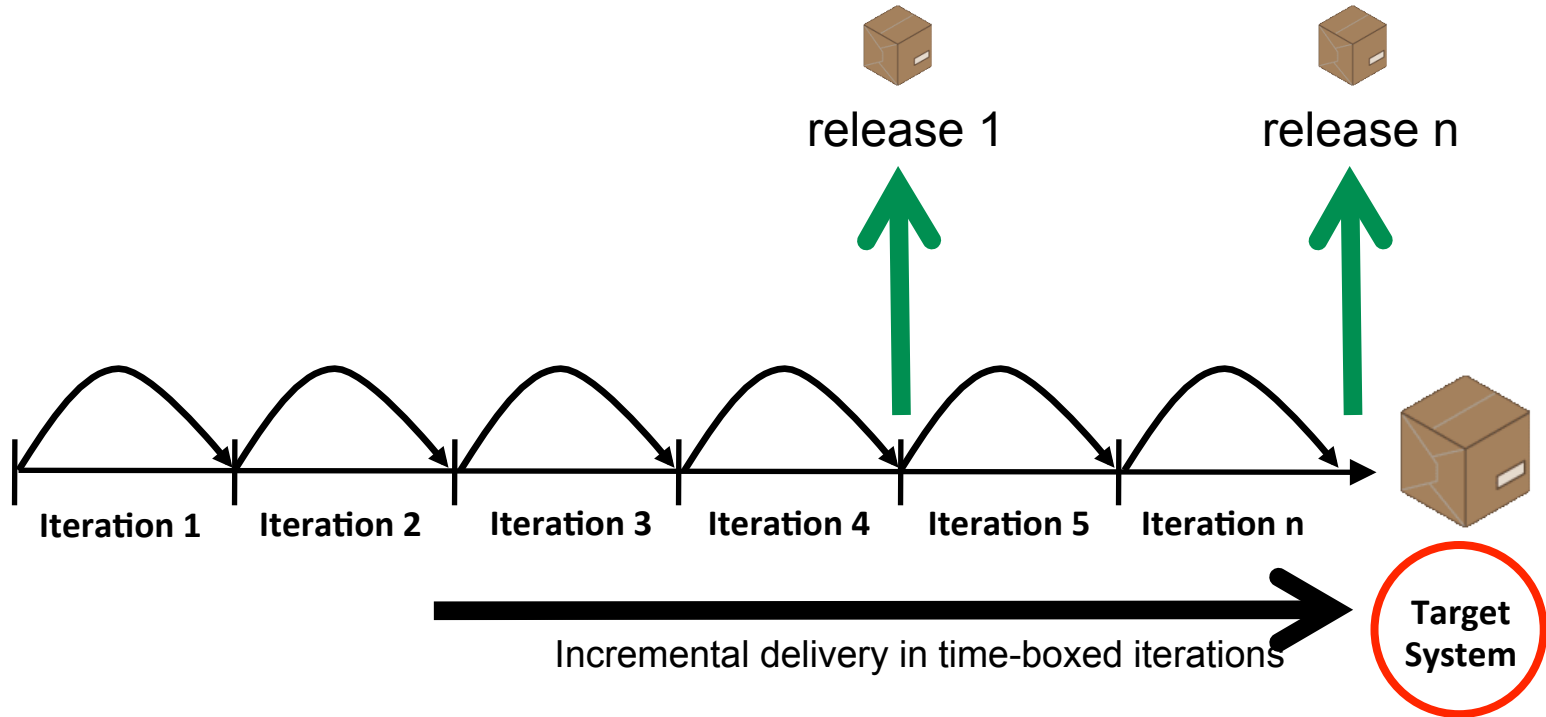
Waterfall Process Development Process

Linear & Sequential

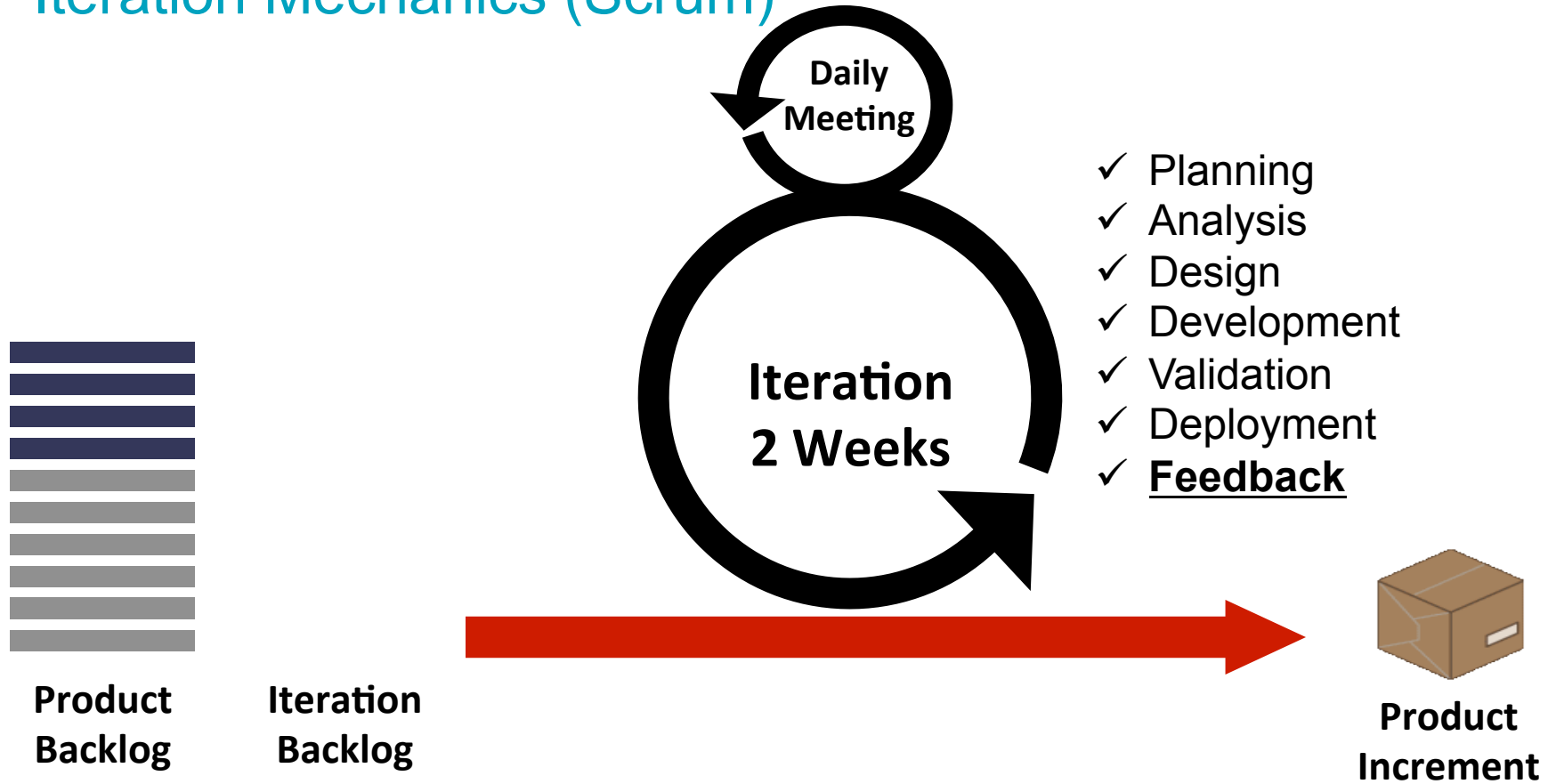


Source: Cisco Product Development Methodology (CPDM)

Agile (Iterative) Development Process



Iteration Mechanics (Scrum)



Agile Manifesto Values

Individuals and Interactions over Processes and Tools
Working Product over Comprehensive Documentation
Customer Collaboration over Contract Negotiation
Responding to Change over Following a Plan

That is, while there is value in the items on the right, we value the items on the left more.

www.agilemanifesto.org

The Scrum Team

- Small teams: 5-9 people
- Collocated
- Cross functional
- Capable of delivering product increment in 2 weeks
- Self managed



Scrum Brings Two Key New Roles...

Scrum Master:

- Key facilitator for the team
- Removes impediments
- Supports values & practices
- Servant leader
- Not a decision maker

Product Owner:

- Defines, prioritizes and maintains the backlog
- Owns the product vision and roadmap
- Represents (or is) the customer/client

...And Changes Many Others

- Managers no longer command and control → coach and empower
- Team members share knowledge and collaborate to deliver results
- Product Managers communicate with customers differently
- Project Managers are not needed
- Program Managers work across multiple scrum teams for a product

The Waterfall Process

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The Agile Process

- Value driven
- Fixed time and resources, variable scope
- Short Cycles – Working software every 2 weeks
- Eliminates waste
- Emphasis on frequent feedback
- Embraces change
- Inspect and adapt

Why Agile?

- Reduced time-to-market
- Increased quality
- Reduced waste
- Better predictability
- Better morale
- Higher productivity
- Enables competitive advantage
- Fuels innovation



World's Best Stealth Fighter is not Made in America

Bill Sweetman, Aviation Week

- Saab JAS 39E Gripen
- All systems radically improved, cheaper than previous version
- Cost \$43M (80% less than F35)
- Just won in Brazil, may beat F35 in Denmark
- Agile development using Scrum



Source: *Jeff Sutherland: Disruptive Leadership with Scrum*, 10/6/14 talk at Cisco

The Industry is Learning



94%

- 94% of companies today have at least one agile project

Scrum Is Mainstream

www.simplyhired.com/search?q=Scrum&l=San+Jose%2C+CA&mi=50

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Keywords

Scrum

Location

San Jose, CA

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1 - 10 of **22,853** Scrum jobs near San Jose, CA

Email address

OK

[IT Project Manager, Scrum Master \(31379\)](#)

Stanford Health Care - Palo Alto, CA

with team members to implement Agile/Scrum best practices Diligently prepare and ... with minimal supervision PMP and/or Agile, Scrum Practitioner certification a plus.

14 days ago from Stanford Health Care

[Sr Project Manager / Scrum Master](#) ^{NEW}

Etouch Systems - Mountain View, CA

and technology needs. I am looking for a Scrum Master who is well versed in AgileSCRUM ... with direct experience working with multiple scrum teams using Agile Proven ability to...

1 day ago from Dice

[PM Scrum Master 2-5 years experience](#) ^{NEW}

Gensphire - Fremont, CA

from engineers to IsquoCrsquo level Scrum Master and Agile experience Prior ... Master PMIPMP certification Cloud Operations, SaaS, Scrum, Project Management, PMP,...

1 day ago from Dice

[SFDC with Scrum // Bay Area](#)

IDC Technologies - San Francisco, CA

Sort by

Relevance Date

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▼ Distance

Exact location

Within 5 miles

Within 10 miles

Within 15 miles

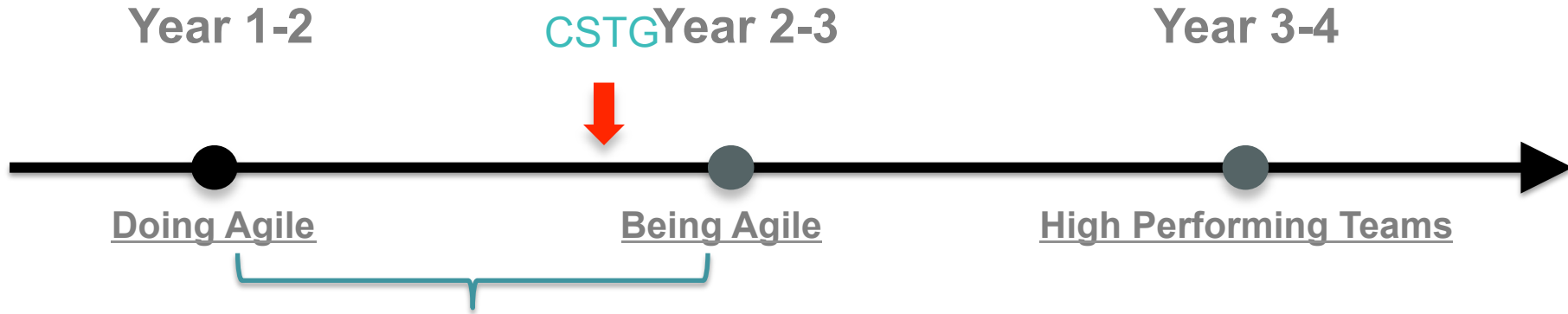
Within 25 miles

Within 50 miles

Within 100 miles

Agile Transformation Journey @ Cisco

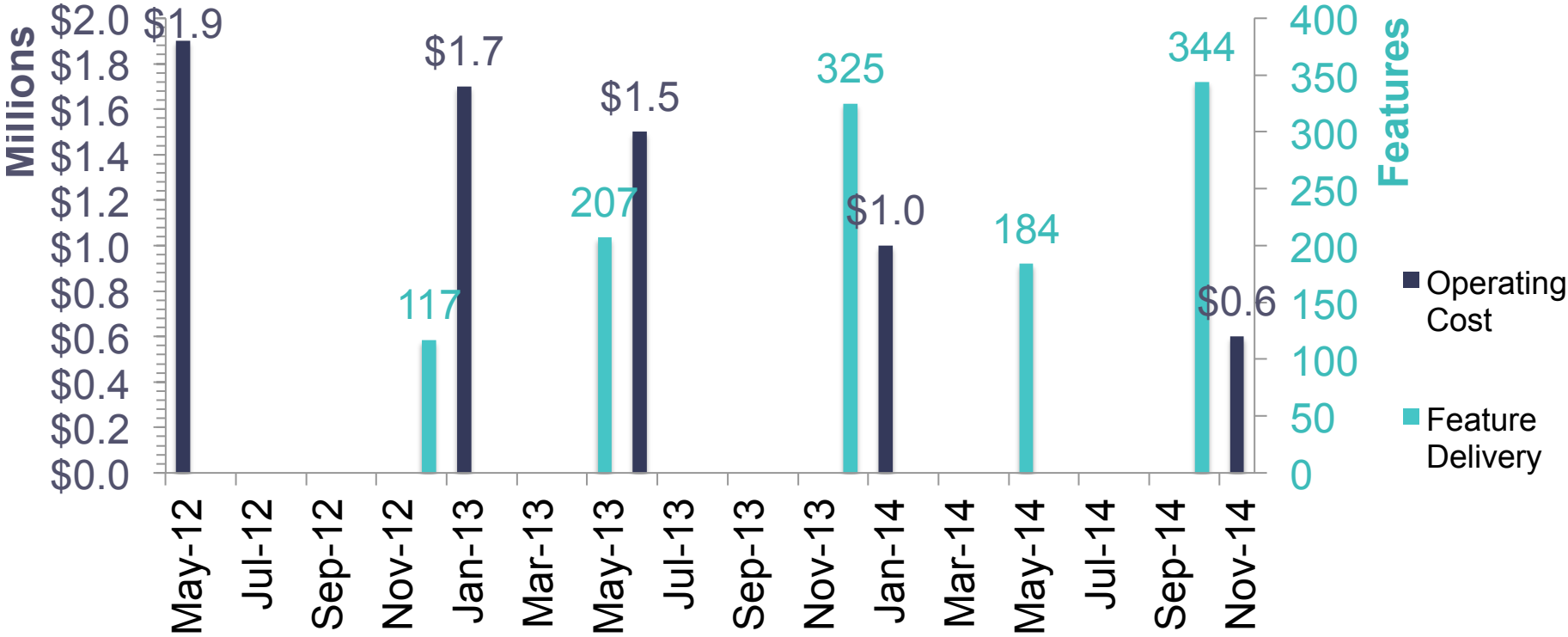
Typical Agile Transformation Journey



This is the hardest part:

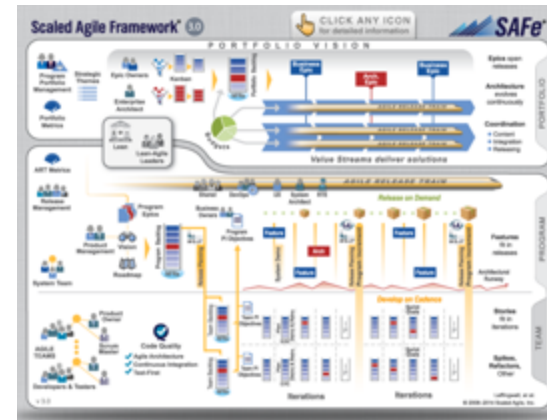
- Organizational structures and constraints come into play
- Cultural and mindset changes are challenging
- High impact on business and operations

Sample CSTG Project: 2.5 Years into the Journey



Scaling Agile Beyond Scrum

- What if forming scrum teams is not enough?
- CSTG uses the Scaled Agile Framework (SAFe)
 - Team – Be Agile
 - Program – Scale Up
 - Portfolio – Stay Lean
- Brings agile and lean principals to programs and portfolios
- 250+ person Agile Release Train Launch planned for Nov, 2015



Project Management As A Career

Project Management Industries & Fields

- High-Tech
- Manufacturing
- Visual Design
- Pharmaceutical
- Process Automation
- Product Development
- Construction
- Engineering
- Quality Assurance
- Industrial Design

Day in the life of a Scrum Master

- On Planning/Review Days:
 - Facilitate Iteration Demo and Review
 - Facilitate Iteration Retrospective
 - Facilitate Iteration Planning session

...Prepare for and carry out this full day activity

- On Non-Planning Days:
 - Facilitate Daily Scrum
 - Work with Product Owner to maintain and groom the backlog
 - Manage and resolve obstacles for the team
 - Participate in Scrum of Scrums






...Be present with the team

Traits of a Scrum Master



- Responsible
- Humble
- Collaborative
- Influential
- Knowledgeable
- Good listener
- Respected

Certifications (Waterfall)

	CAPM	PMI-RMP	PMI-SP	
Name	Certified Associate in Project Management	PMI – Risk Management Professional	PMI – Scheduling Professional	Project Management Professional
Offered By				
Education	Associated Degree	Bachelors	Bachelors	Bachelors
Work Experience	1500 Hrs	3000 Hrs	3500 Hrs	4500 Hrs + 3 Yrs

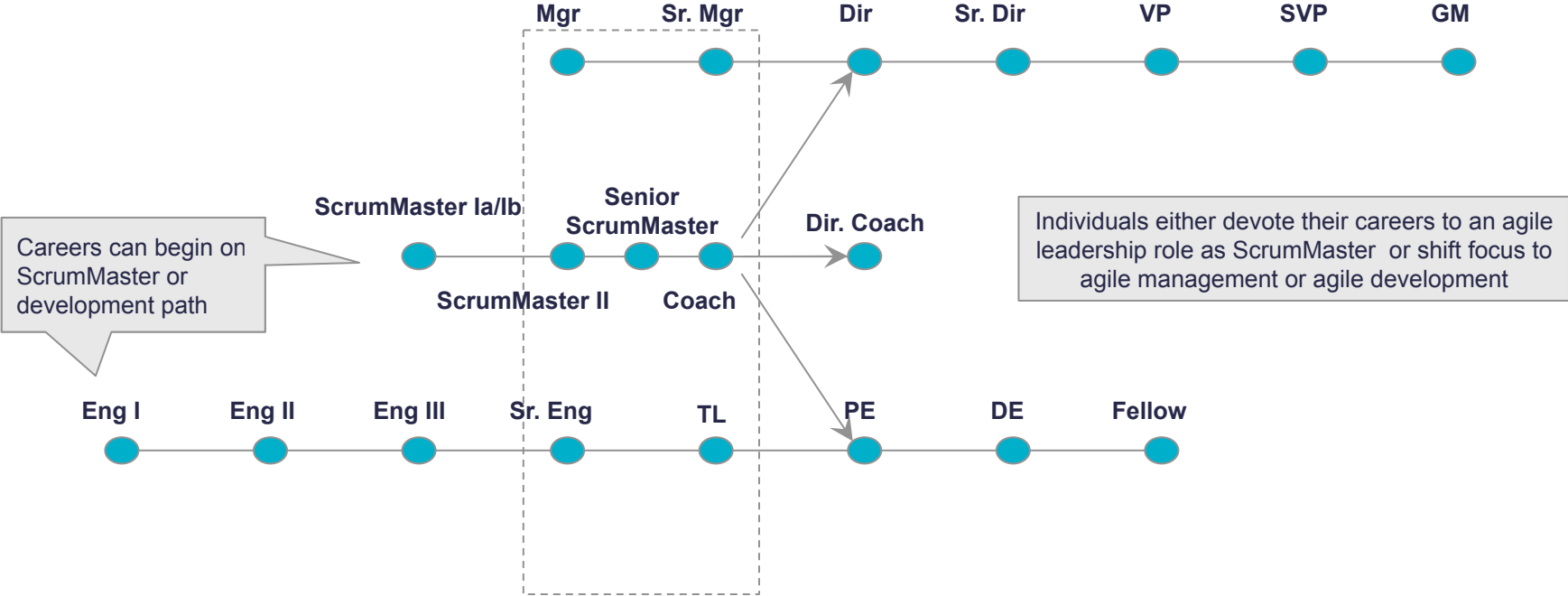
Source: Project Management Institute (PMI)

Certifications (Agile)

				
Name	Certified Scrum Master	Certified Scrum Product Owner	Certified Scrum Professional	Certified Scrum Coach
Offered By	 ScrumAlliance™ your trusted source of Scrum knowledge	 ScrumAlliance™ your trusted source of Scrum knowledge	 ScrumAlliance™ your trusted source of Scrum knowledge	 ScrumAlliance™ your trusted source of Scrum knowledge
Work Experience	Minimal	Minimal	2000 Hrs	“Scrum Expert”
Certification Process	2-day Class, Pass Exam	2-day Class, Pass Exam	Pass Exam	3 year interactive application

Source: scrumalliance.org

Cisco Scrum Master Career Path



Overlap between grades allows transition between paths for individuals with appropriate profiles

Tips to get into the field

- Internships – Great way to get exposure and business experience
 - Most companies have internship programs
- Education:
 - Product development process
 - Software development concepts and practice
- Stay up on industry trends
 - Books
 - Blogs
 - News articles
 - Webinars/Seminars
- Participate in local chapters of organizations e.g. PMI, SV ALN, Meetups

Thank you.

