

Inspiring, Enabling and Driving Quality Improvement

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My Background

- Responsible for Adobe Quality Improvement World-Wide
- Similar role at Intuit for five years
- 25 years of software engineering experience at HP, Intuit and Adobe Systems:
 - Engineering/IT Leader for Intuit Payroll Services business providing payroll services to 1,000,000 companies
 - CTO/CIO for Airline Reservations Systems business servicing low cost airlines including JetBlue, AirTran and RyanAir
- M.S., Walden University, Management of Technology
- B.S., University of Oregon, Computer Science and Psychology

About Adobe



- Nearly \$3 billion in revenue in FY2009, 7100+ employees

- Adobe donates a minimum of 1% of net income to philanthropy

- More than half of Adobe's revenue is generated outside the United States

- Industry leading technologies with global wide-spread adoption

- Adobe® Reader® is distributed in 26 languages on 10 major platforms worldwide

- Adobe® Flash® Player has 98% reach on connected PC's and 8 million installs per day

- More than 90% of creative professionals have Adobe Photoshop® software on their desktops

Fortune Magazine: World's Most Admired Companies 2010

Industry: Computer Software

Rank	Company	Overall Score
1.	Adobe Systems	7.31
2.	Oracle	6.79
3	Intuit	6.73
4	Symantec	6.71
5	Microsoft	6.54

Contenders

Rank	Company	Overall Score
6	Autodesk	6.51
7	Teradata	6.42
8	SAP	6.41
9	Electronic Arts	6.07
10	CA	5.18

Adobe is the World's most admired software company according to Fortune magazine

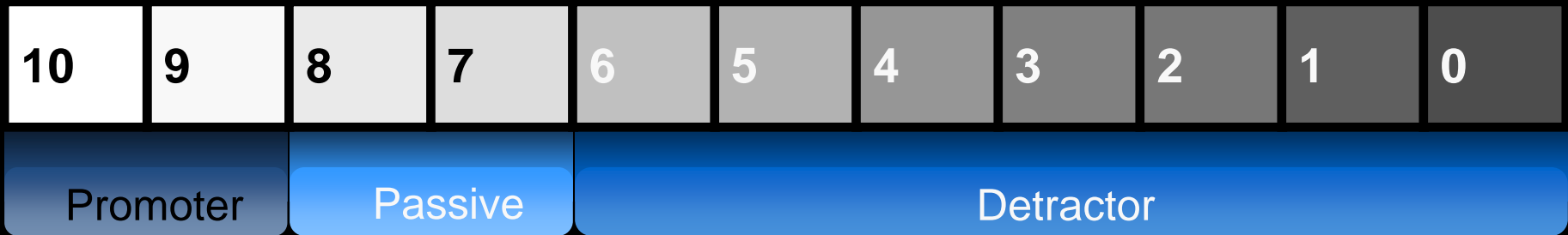
Net Promoter Score

Would you recommend this product or service to others?

Extremely
likely

Neutral

Extremely unlikely



Net Promoter
Score

=

% Promoter

minus

% Detractor

Source: The Ultimate Question: Fred Reichheld, 2006

Promoters share their delight with their friends, family and business associates creating future promoters

The Evolution of Quality at Adobe: 2012

Customers



70% of our customers are product promoters and detractors are rare

Employees



Love the fact they get twice as much and more important work done with less effort and drama

Shareholders



Shareholders see an increase in stock price tied to quality improvement savings

Aspects of this vision are already happening in some Adobe teams

The measurable piece of quality costs is the tip of the iceberg

Engineering Rework
Higher Support Costs
Refunds, Returns, Scrap, Patch downloads

For many software companies :

40% to 50% of Engineering Effort
50% of Customer Support Budget

Less time for innovation
Fewer promoters
Reduced product/service value
Delayed time to market
Increased employee attrition
Reduced employee engagement
Litigation costs

Indirect costs are typically
two to three times direct
quality costs

Source: Principles of Quality Costs, Campanella

Improving quality is a huge opportunity to free up resources for value-added work and make Adobe an even better place to work

Adobe Quality Improvement Objectives

Objectives:

Improved
Customer
Experience

Improved
Engineering
Productivity

Increased
Agility

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Improved
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Questions:

- Are we delighting customers?
- Are high impact customer issues being resolved well or eliminated?
- Is Customer Service Great?

Improved
Engineering
Productivity

- Are major sources of rework identified and reduced?
- Are teams using engineering best practices to find and remove defects early

Increased
Agility

- How much time between feature complete and release dates?
- Is effective Automated Testing in place?

Progress on these goals must be reviewed regularly by Senior Leadership

Adobe Quality Improvement Objectives

Objectives:

Questions:

Metrics:

Improved Customer Experience

- Are we delighting customers?
- Are high impact customer issues being resolved well or eliminated?
- Is Customer Service Great?

- Net Promoter Score
- # Customer Care cases
- Customer Care CSAT

Improved Engineering Productivity

- Are major sources of rework identified and reduced?
- Are teams using engineering best practices to find and remove defects early

- % of dev effort spent on system testing
- % defects found before System Testing

Increased Agility

- How much time between feature complete and release dates?
- Is effective Automated Testing in place?

- % of development cycle devoted to system test
- # days effort /test cycle
- Code coverage

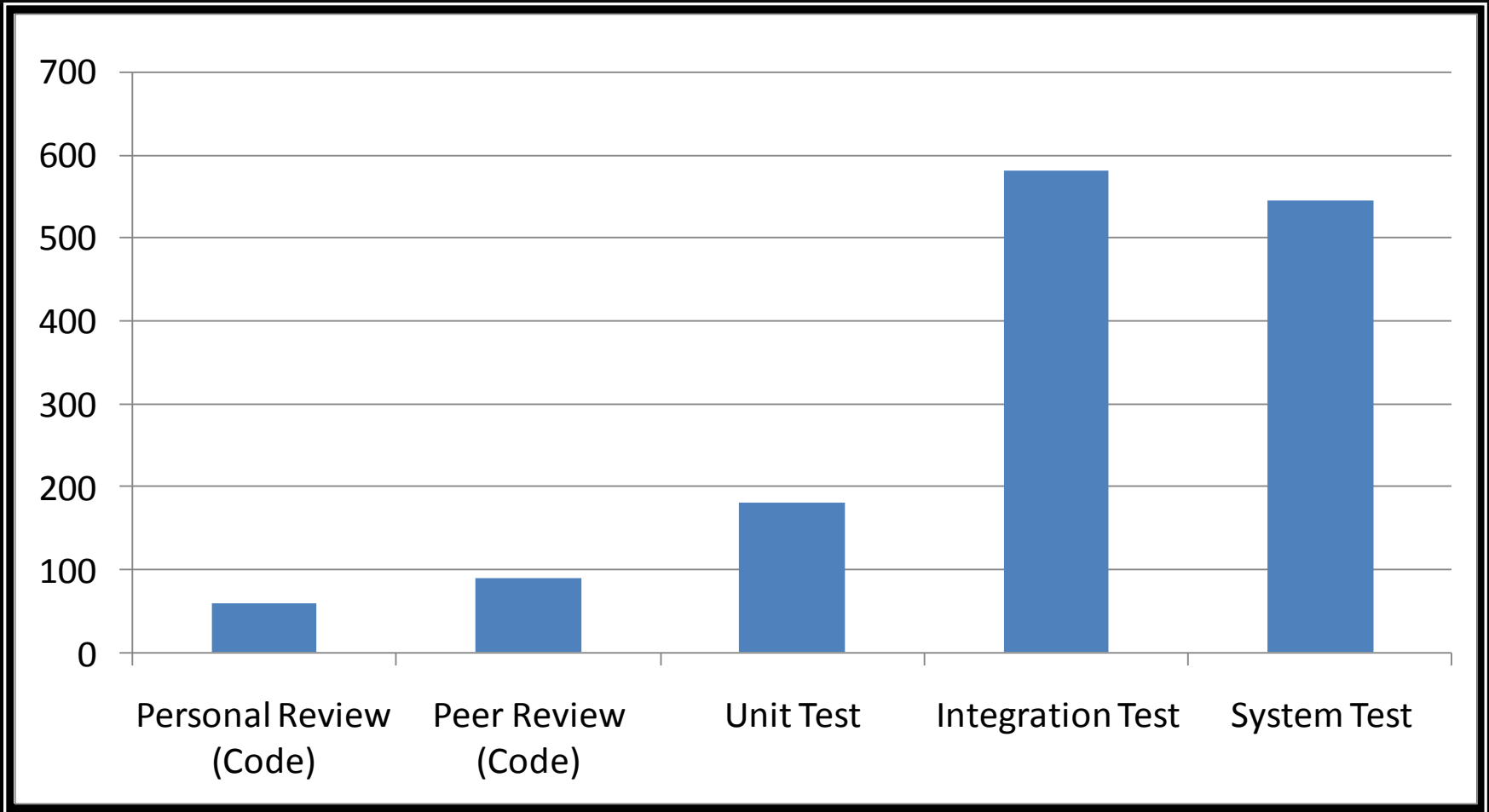
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What's Important and How are We Doing?

Goal	Question	Industry (Typical)	World Class
Improved Customer Experience	How satisfied are your customers? (Net Promoter Score)	20%	70%
	% of dev effort spent system testing	50%	10%
Improved Engineering Productivity	% of defects found before system test?	10%	>90%
	Effort required to do a test cycle	Varies	Hours
Increased Agility	Automated code coverage level	Varies	90%

Sharing what's possible, rewarding and recognizing improvement drives progress

Minutes to Find and Resolve a Defect by Discovery Method



Source: Adobe Software Projects using the Team Software Process

Early and efficient removal of defects is key to productivity and quality

These projects reduced rework while delivering improved quality

Project	Pre-System Test Yield ¹	%Effort in System Test ²
A	94%	11%
B	83%	15%
C	75 %	16%
D	78%	32%
E	88%	18 %
F	83%	9%
G	75%	13%
Average	82%	16%

1) Percentage of defects removed during inspections and automated unit tests. Adobe TSP teams have an average pre-system test yield of 82%

2) Percent of effort spent in test and fix activities. Adobe TSP team avg. of 16% represents three times less rework than typical software projects.

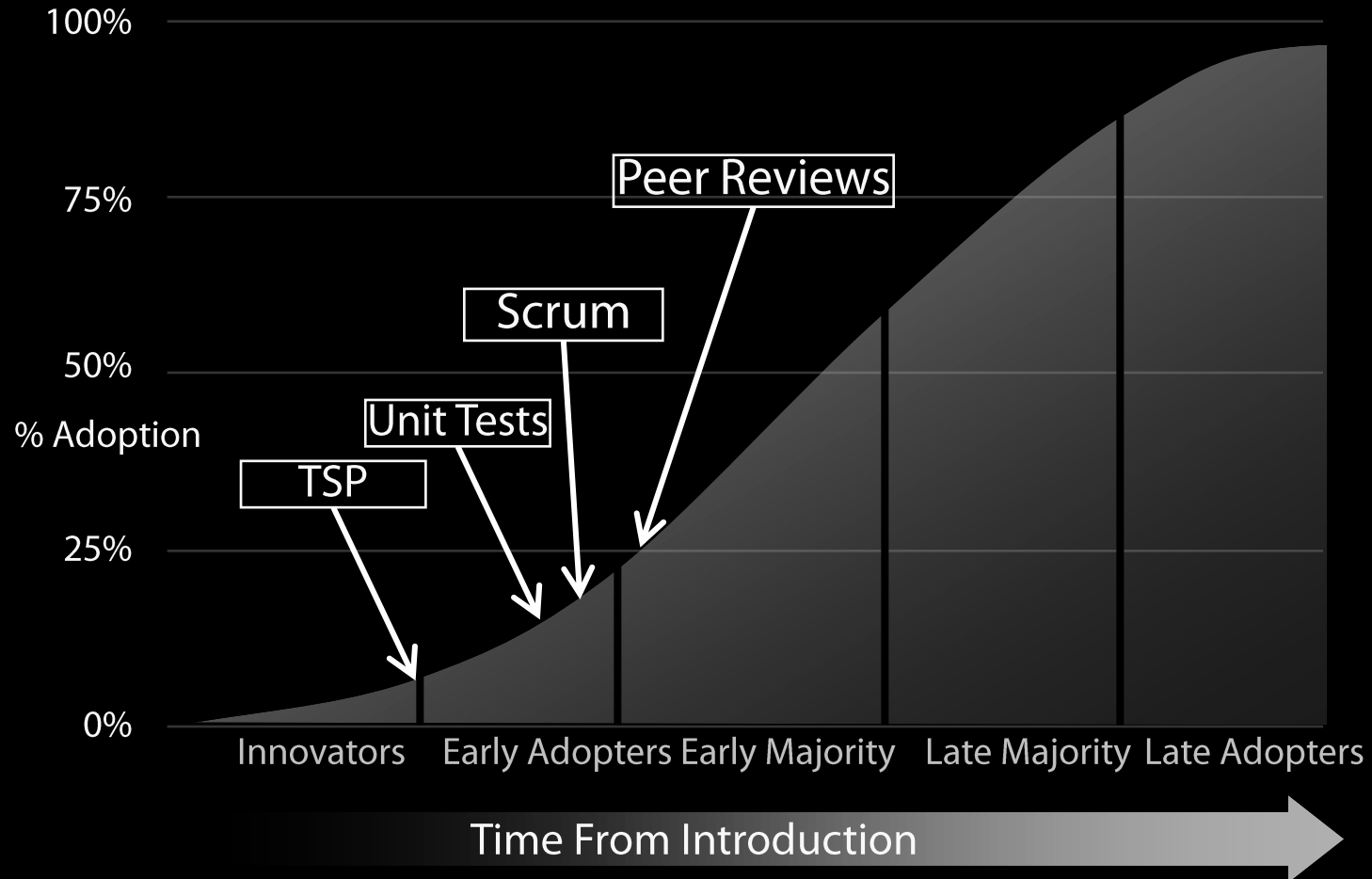
Engineering Best Practice Rollout Strategy

- Ensure organizational leadership expects and requires delivery of software products with quality
- Establish examples of excellence
- Only work with genuinely excited and committed teams
- Ensure each project has a strong coach
- Initial teams are promoters
- Build coaching capacity/leadership in every organization

A viral adoption approach works best

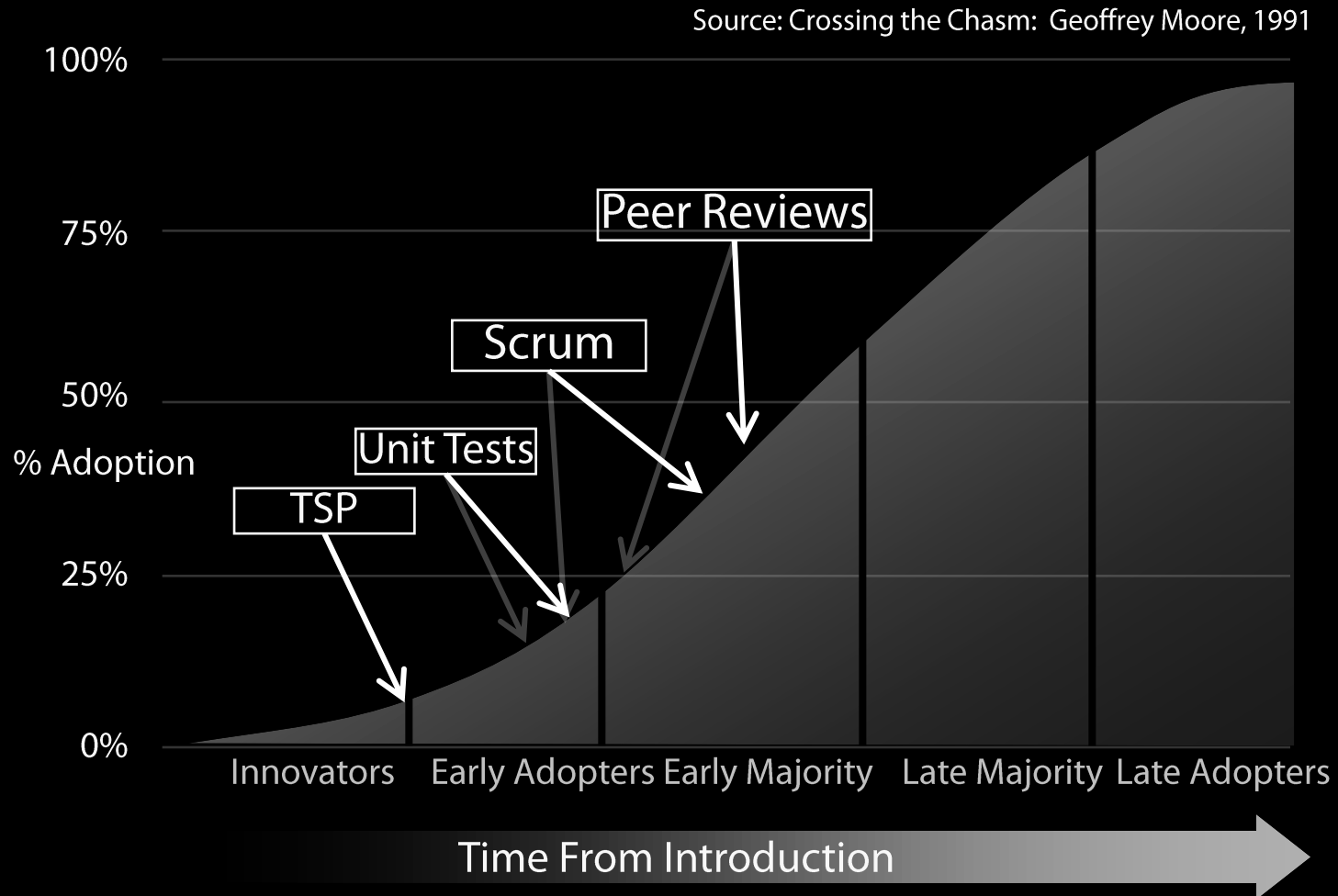
Best Practice Adoption at Adobe (October 2009)

Source: Crossing the Chasm: Geoffrey Moore, 1991



Viral adoption of best practices is best

Best Practice Adoption at Adobe (October 2010)



Adoption on a fast ramp for many best practices

2010 Quality Improvement Results

- 42,000 peer reviews found 30,000 defects early reducing rework and improving quality
- 1200+ engineering staff trained on Scrum, Peer Reviews, Test Automation or TSP
- Scrum, Peer Reviews, Unit Testing and TSP adopted by teams across Adobe – with major benefits
- Customer experience improvements reduced installation and activation cases saving more than \$2.5M per year
- High Quality Creative Suite (CS5) delivered

CS5 overall quality compared to CS4

30% fewer defects found during
System Testing



30% fewer defects deferred (shipped)



20% fewer Tech Support Cases

CS5 has significantly better overall quality than CS4

What you must do to Inspire, Enable and Drive Continuous Quality Improvement

- Expect teams to deliver a measurably better quality with each release with improving efficiency
- Work directly with Customers and Customer Care
- Ask teams to set and own improvement targets
- Regularly review, recognize and reward progress