



Team Software Process at Adobe: Current State of the Program

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Topics

- History of Adobe's program
- Current status
- Highlights of one TSP team
- Other TSP teams
- Current TSP related activities
- Benefits

History of Adobe's Program

- TSP program began in 2008
 - Evangelized by a senior quality leader
 - Several executive and management courses taught
 - Fairly strong interest in TSP
 - Four teams started TSP pilots in 2008
- Seven additional teams began TSP pilots in 2009
- What were teams using prior to TSP?
 - One team using scrum
 - The others using waterfall

History of Adobe's Program

- Since program inception
 - TSP tried in three large organizations
 - Total of eleven teams
- Teams did well overall – TSP concepts well received by most
- New for Adobe (some prior experimentation)
 - Self managing teams
 - Iterative development
 - Concept of early defect removal
 - Planning and tracking of time spent in quality activities
 - Highly structured estimation
- TSP helped teams improve their quality and planning
- Projects performed better than their predecessors

Current State of the Program

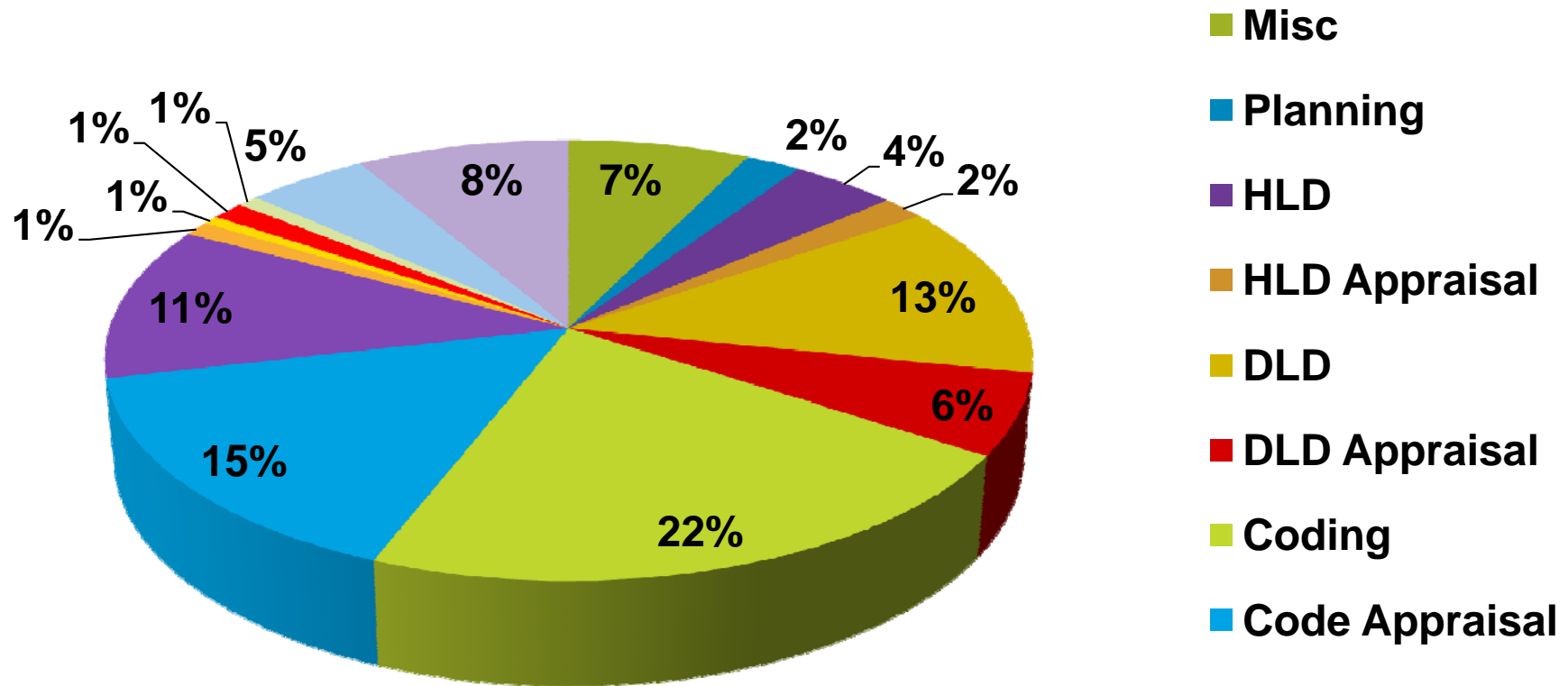
- One team still doing their initial TSP project
 - Team Leader will decide after project completes in 2012 whether to continue with TSP
- The other teams completed their pilots and decided not to continue doing TSP
- What the other teams are now using
 - Six – scrum
 - Three – custom waterfall process with TSP activities
 - One – disbanded

Highlights of One TSP Team Doing TSP

- One team within a large product organization
- Several million LOC
- Started TSP pilot in Dec 2008
 - Very large UI intensive project
 - Eleven iterations so far
- At start of project: four developers and two QEs
- Currently: eight developers and one QE

To Date Results – One Team 2008-2011: Time in Activity

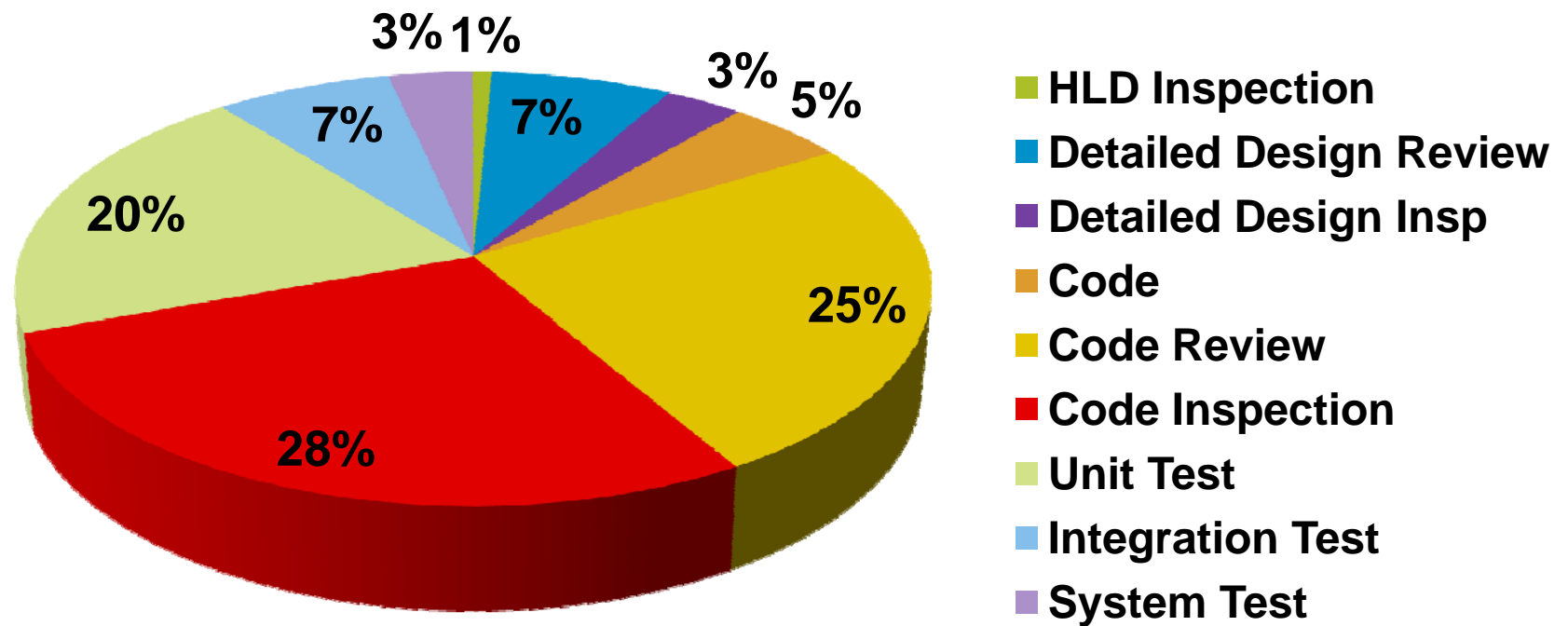
72% of time in Design & Implementation
8% of time in System Test



Design/Design Appraisal: 2.2
Code/Code Appraisal: 1.4
Design/Code: 0.8

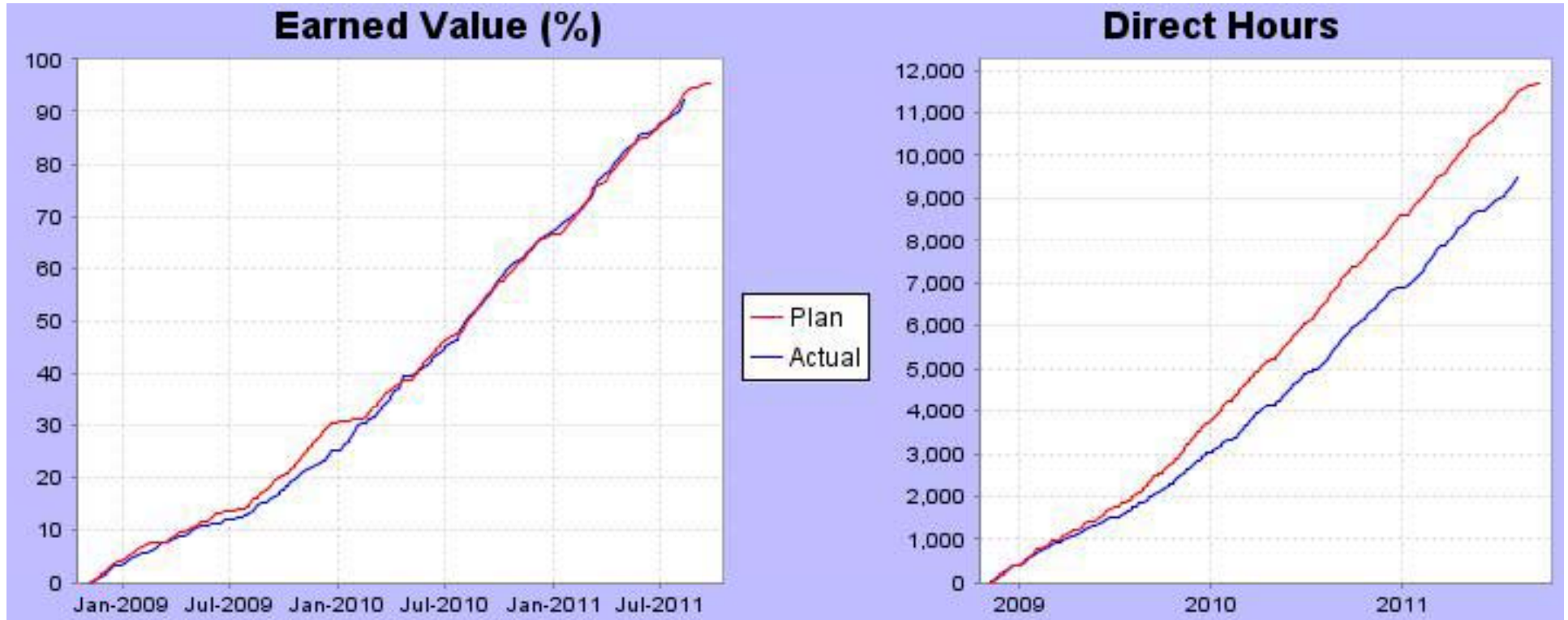
To Date Results – One Team 2008-2011: Defects

91.6% of defects removed prior to System Test
Defect density so far 1.85 system test defects/KLOC



To Date Results – One Team 2008-2011

Team meticulous with planning and tracking



Productivity: 7 LOC/Hr

One TSP Team – Improvements and Benefits

- Better planning and tracking of current tasks and overall project
 - Management likes ability to track weekly EV and estimate completion date of overall project based on actual data
 - Team likes ability to make their own plans and objectively load balance
- Team appreciates that quality activities are built into the process
 - HLD and DLD
 - Reviews and Inspections
- Above average teamwork across diverse geographical areas
 - Excellent Team Leader / Lead Architect / Planning Manager trio
 - Everyone operating as a single team

One TSP Team – Results and Impact of TSP

- Team proud of their project so far but unsure of its final outcome in terms of quality
 - Nature of project – difficult to test up front
 - Long duration – difficult to prove/disprove that the large up front investment in quality was worth it
- Result – uncertainty of overall benefit of doing TSP
- TSP perceived as slowing down the team
 - Perceived as good for measurable, predictable projects
 - Perceived not as good for projects requiring innovation and rapid development

Other TSP Teams – Team Member Feedback

- What teams liked about TSP
 - Early defect removal activities – how to achieve higher quality
 - Measurement: plan vs. actual – how to implement it
 - Self managing
- Issues team members had
 - Tracking of time
 - Tools
 - Amount of time spent on planning
 - Some QEs felt TSP not suited to testing process – TSP ‘dev centric’

The Other TSP Teams – Senior Manager Feedback

- Senior managers liked TSP but decided not to continue with it
 - Some needed common data and reporting for their entire organization
 - Some wanted more task hours to increase productivity
 - Some wanted ability to view individual team member data
- Two large organizations adopted most of TSP as their standard, minus the things they didn't like and minus the name
- Biggest barriers to adoption
 - Training
 - Self managing teams – task hour limits and private personal data
 - Tool with full database support – scalable, with reporting for large teams
 - Perceived as not an agile process

A Bigger Picture

- Meanwhile, in 2009, some teams began doing Scrum at a grass roots level
 - One person took leadership role
 - ~50 teams and over 1000 people now doing Scrum at Adobe
 - More teams currently adopting scrum
- Many teams doing or adopting Scrum instead of TSP – why?
 - Much easier to adopt
 - Easier to do – simple
 - Popular among most who are using it – critical mass
 - Little personal data tracking
 - Tools
 - Less expensive to deploy

TSP Related Programs and Activities at Adobe

- Agile now an Adobe wide quality initiative
 - Currently Scrum, but may evolve to include more TSP like practices
- Early Defect Removal initiatives
 - Peer Reviews
 - Static Analysis
 - Dynamic Analysis
 - Unit Testing
- Company-wide data warehouse for measurement and reporting of early vs. late defects and customer satisfaction
 - Used to track quality goals plan vs. actual for projects

Benefits Realized from TSP

- Increased awareness of how quality can be created up front
- Collecting and reporting of project metrics seen as feasible
- Metrics widely used to evaluate and measure projects
 - Early defects
 - Overall quality
- Early defect removal understood and highly valued
- TSP principles serve as a guide for Adobe's quality initiatives
 - Adobe's high bar for what is achievable
 - Provides a standard for engineering quality metrics and best practices



Adobe