

Automating and Managing Software Development

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AccuRev: *Process-Driven SCM Software*

- 500+ Global Customers
- 70%+ Annual growth
- 10+ Years Process Improvement Expertise
- Named “Gartner Visionary”
- Lexington, MA headquarters

“As one of the original architects and multiple patent holders for ClearCase, I recognize that software development has changed considerably over the last 20 years. This change requires a tool that meets the needs of today’s more complex and agile environments.”

*- David Jabs,
AccuRev, VP Engineering*



Mission Critical Software Development

Embedded Systems

SanDisk 

NORTHROP GRUMMAN

AVAYA

SIEMENS

 **TEXAS
INSTRUMENTS**

SONY

 **POLYCOM**

CHRYSLER

LOCKHEED MARTIN 

BROADCOM.

Software Products

 **KRONOS**

 **symantec.**

LAWSON

McAfee

 **sterling commerce**
An AT&T Company

tyler works.

 **IDT**

 **Lufthansa**

HYLAND
SOFTWARE

E-Business & IT

 **Mobile**

American Airlines

citibank

Alaska Airlines

ING 

ORBITZ

STARWOOD

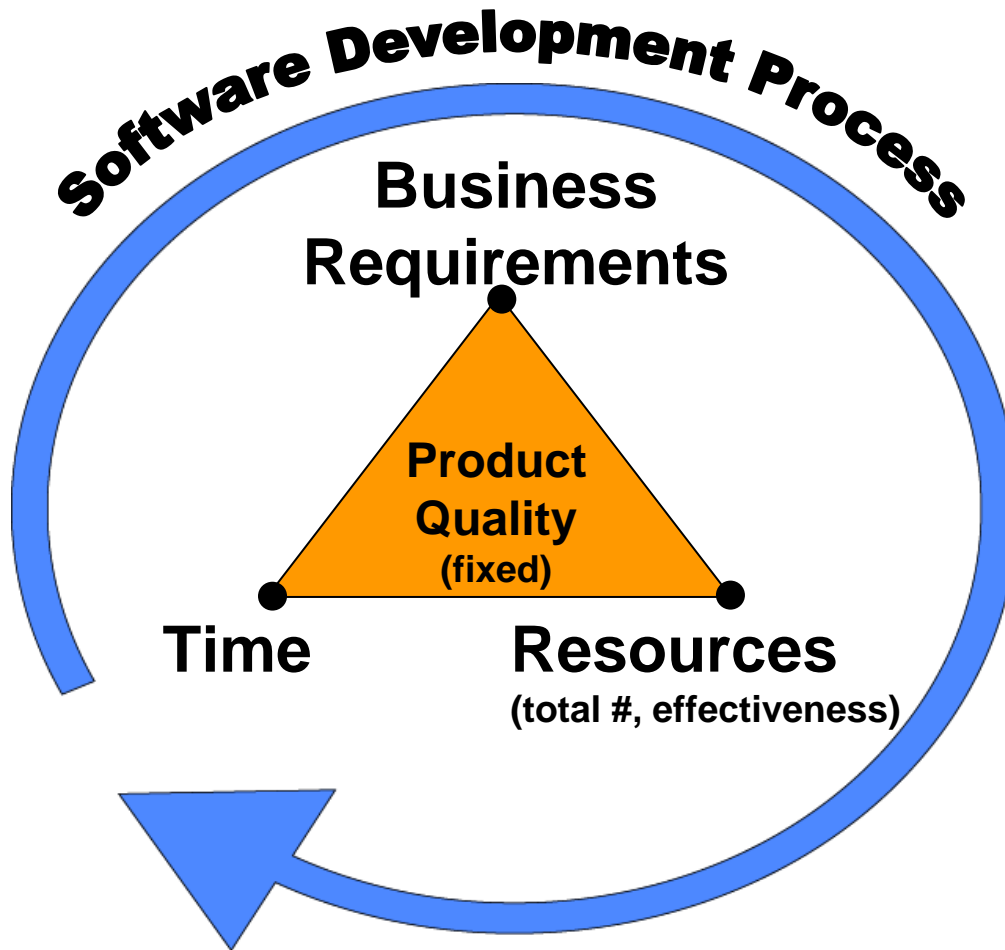
HOTELS & RESORTS WORLDWIDE, INC

PUTNAM
INVESTMENTS

 **THE HARTFORD** 

AccuRev

Increase Software Development Throughput



- Product Quality is fixed

- Business requirements persist (increase?)

- Resources may be cut

- Little/no schedule relief

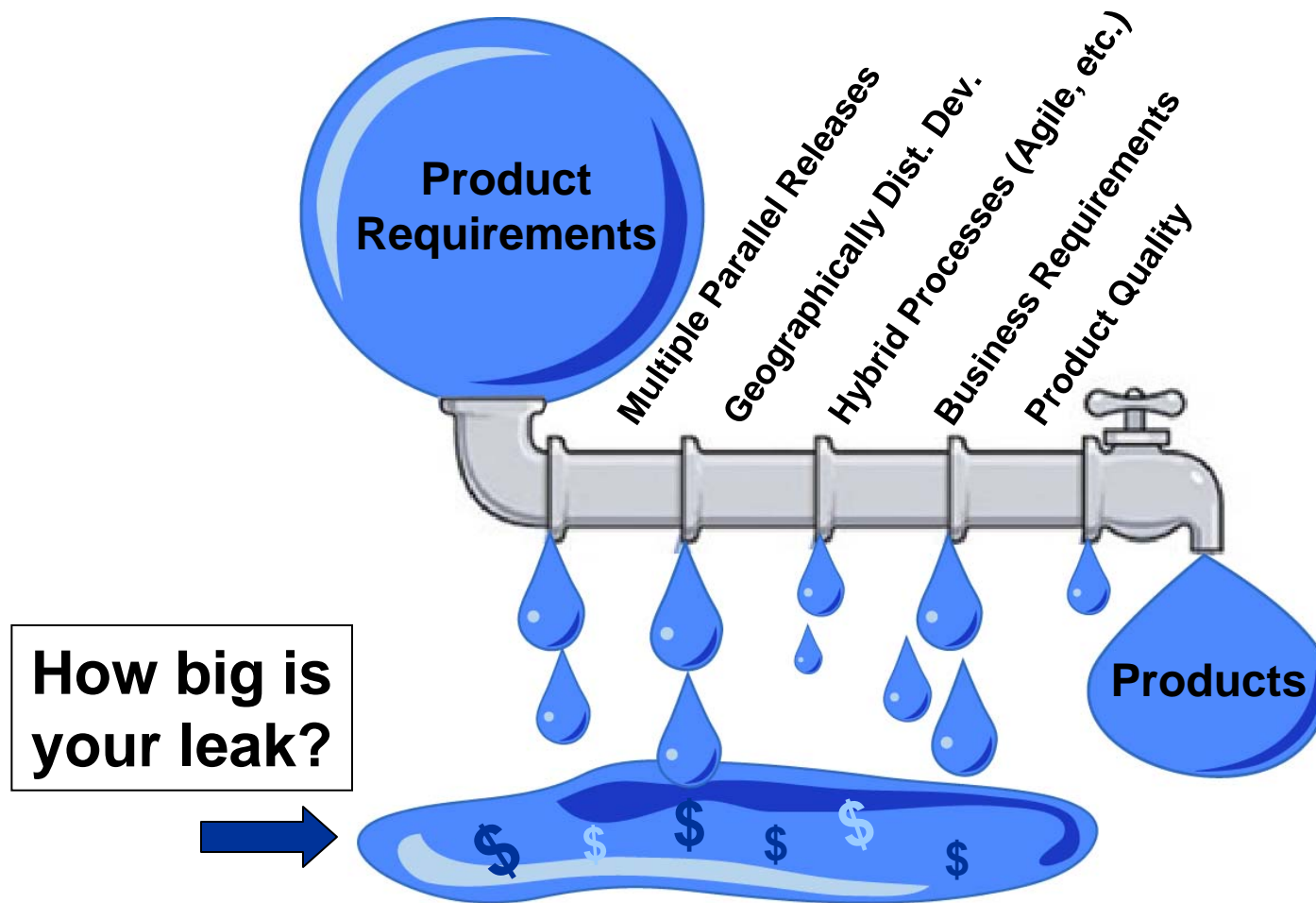
- Increased throughput by improving software development processes
 - Automation
 - Optimization

The Top 5 Process Automation Challenges

Software Development Process

1. Automate parallel development
2. Utilize the most cost-effective resources
3. Manage hybrid processes (Agile, waterfall, etc.)
4. Get the requirements right
5. Improve product quality

Getting it Right...



1. Automate Parallel Development

- **Business Driver** → Manage/deliver multiple simultaneous releases
 - Current shipping, Previous release(s)
 - Next release under development & Future projects
 - Custom releases
- **Goal** → Manage complexity where same changes exist in multiple releases in order to minimize regressions
 - Branching is often avoided today due to heavy manual overhead
- **Primary Impediment** → Branching/Merging is hard!
- **Solution** → **Automated branching model**
 - Built-in intelligence and memory for branches
 - Eliminate regressions
 - Provide mechanism to easily move functionality between releases
 - Full compliance and security



2. Geographically Distributed Teams



- **Business Driver** → Use most cost-effective resources for each project
- **Goal** → All developers appear to be co-located, utilizing same processes with lower complexity
- **Primary Impediment** → Managing GDD is very hard!
- **Solution** → **Automated visual processes enforced**
 - Ensure compliance with the processes within the tools
 - Developers always receive correct code updates
 - Developers always check-in to the right place
 - Developers have full visibility into process (w/ security)
 - Full security as appropriate for both remote and outsourced teams

3. Managing Hybrid Processes



- **Business Drivers** → Introducing Agile projects
- **Goals** → Projects with shared code bases managed independently with appropriate (different) processes
- **Primary Impediment** → Move to Agile can takes years
- **Solutions:**
 - Understand existing processes in-depth
 - Develop plans for migration of processes
 - Optimize all processes across the enterprise
 - Enable native integration of code bases across projects

4. Requirements – Getting them Right & Tracing

- **Business Drivers** → Meet customer/market need
- **Goals** → Accurately determine customer requirements and tracing progress across releases
- **Impediments:**
 - Waterfall processes often result in “old” requirements at release
 - Software development tools do not trace requirements
- **Solutions:**
 - Agile processes enable just-in-time decision-making and more accurate requirements at release
 - Choosing tools that enable
 - Automate reporting
 - Enable requirements traceability with a single tool for version control, and change management and workflow, with a common database
 - Utilize *Change Packages* to group changes by requirement or defect

5. Overall Quality of Product Being Delivered



- **Business Driver** → Customer Satisfaction
- **Goals** → Find bugs early in the process because it's a lot less expensive
- **Primary Impediments** → Establishing and enforcing appropriate processes
- **Solutions:**
 - Private developer workspaces/sandboxes
 - Automated static code analysis with gate for code promotion
 - Stable baseline for testing (including automation)
 - Multistage continuous integration model
 - Built-in process enforcement

Agile SCM “Top 10” Checklist

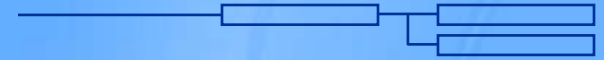
- Deep integration w/ issue tracking & Agile project management
- Full support of issue/story-based dev (e.g., change packages)
- Fully integrated (multi-stage) continuous integration
- Automated unit testing upon source readiness
- Visualize development processes
- Easily change “branching/stream” model (without scripting)
- Private developer workspaces
- Drag-and-drop stories anywhere in hierarchy/process
- Built-in support for refactoring
- High performance, including support for remote developers

AccuRev Enables Agile

- **Visual process development and management**
- **Platform for multi-stage continuous integration**
- **Developer-focused best practices**
 - Private branches
 - Leading-edge refactoring support
 - Drag-and-drop changes
- **Integrated issue-tracking & issue-based dev**
- **Support for both Agile and non-Agile collaboration**
- **Integration with leading Agile tools**

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software configuration management



AccuRev Demonstration

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