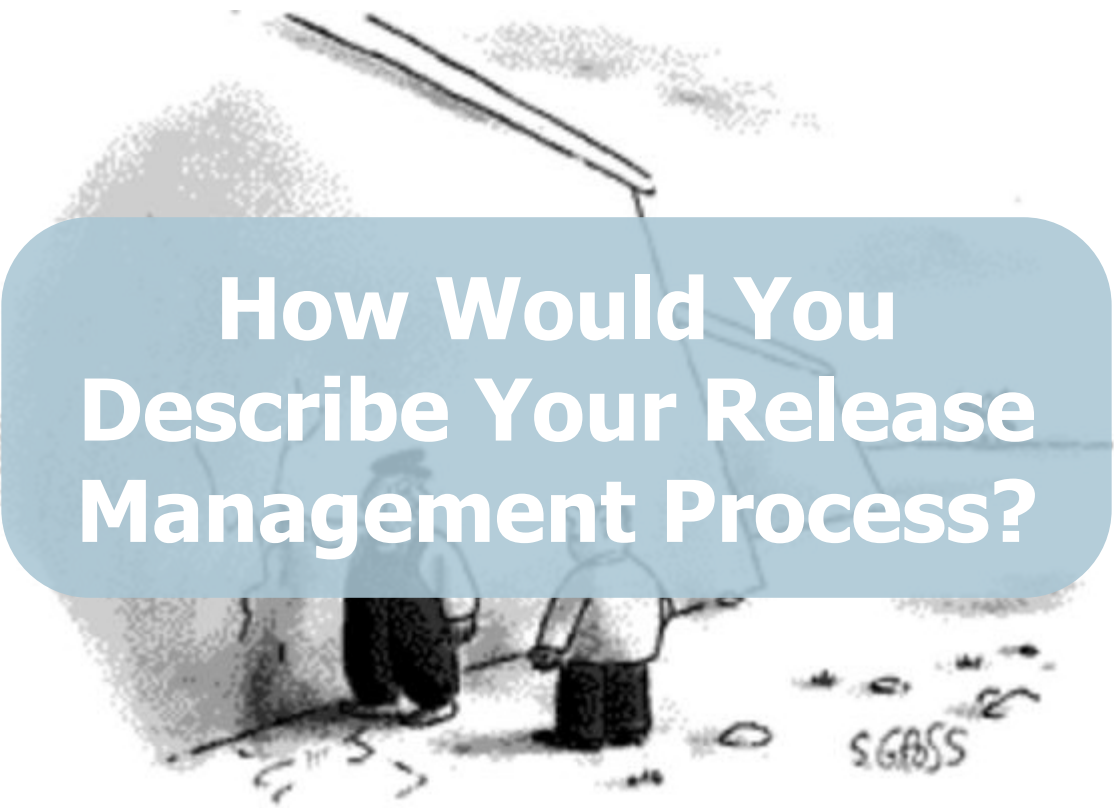# Bridging Development and Operations: The Secret of Streamlining Release Management

Mark Levy, Product Manager – Serena Software

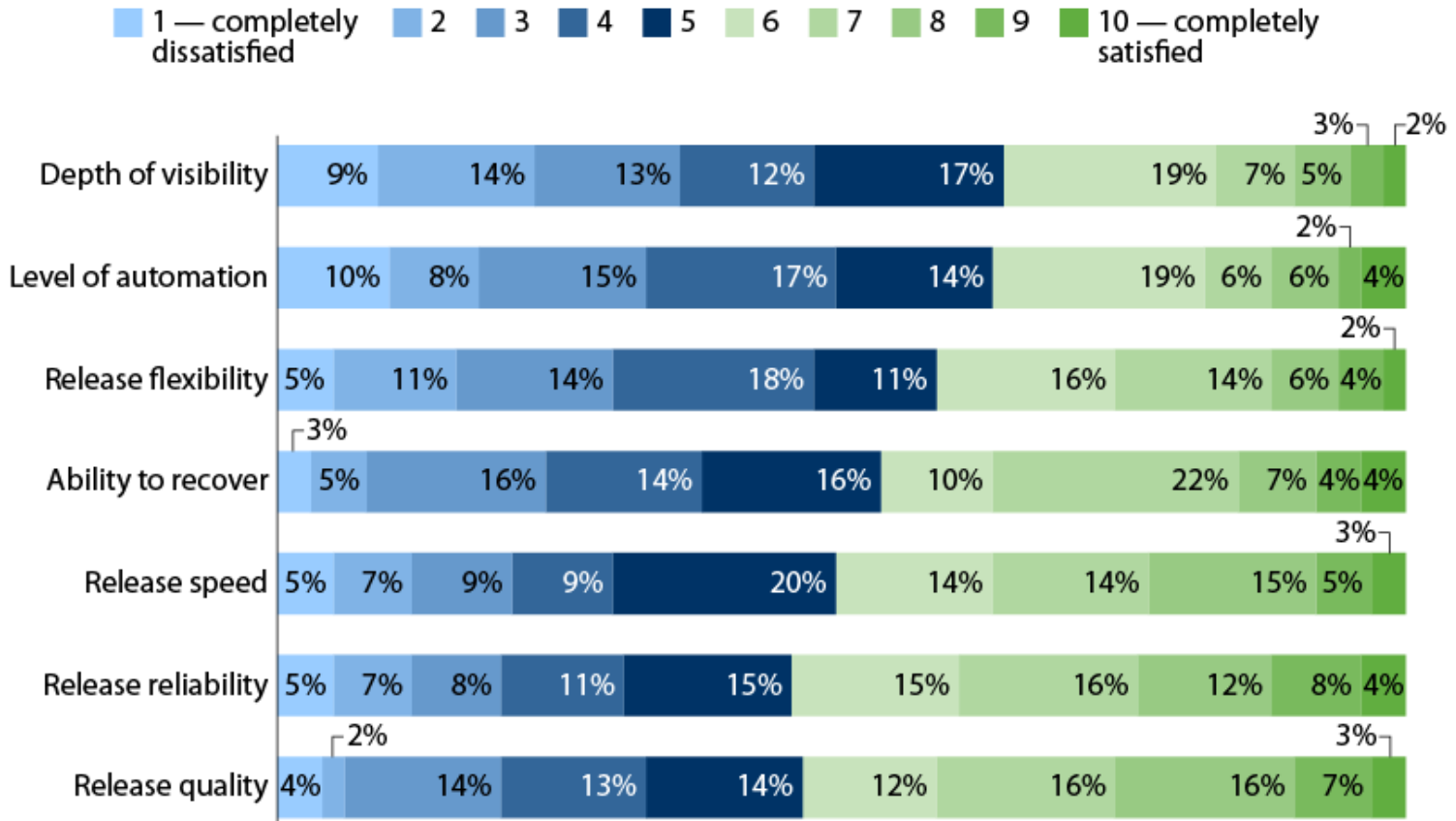**How Would You Describe Your Release Management Process?**

"Instead of doing development, I've been staying up all night making sure the release gets installed "

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Release Management Satisfaction Is Low

"How satisfied are you with the following aspects of your release management process?"

Legend: 1 — completely dissatisfied, 2, 3, 4, 5, 6, 7, 8, 9, 10 — completely satisfied

Aspect	1	2	3	4	5	6	7	8	9	10
Depth of visibility	9%	14%	13%	12%	17%	19%	7%	5%	3%	2%
Level of automation	10%	8%	15%	17%	14%	19%	6%	6%	2%	4%
Release flexibility	5%	11%	14%	18%	11%	16%	14%	6%	4%	2%
Ability to recover	3%	5%	16%	14%	16%	10%	22%	7%	4%	4%
Release speed	5%	7%	9%	9%	20%	14%	14%	15%	5%	3%
Release reliability	5%	7%	8%	11%	15%	15%	16%	12%	8%	4%
Release quality	4%	2%	14%	13%	14%	12%	16%	16%	7%	3%

Base: 101 IT professionals involved in or aware of their company's release management processes (percentages may not total 100 because of rounding)

Source: Q4 2010 Global Release Management Online Survey

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"Deployment problems impacts production availability"

"My business customers don't have visibility into the release, expectations are hard to set"
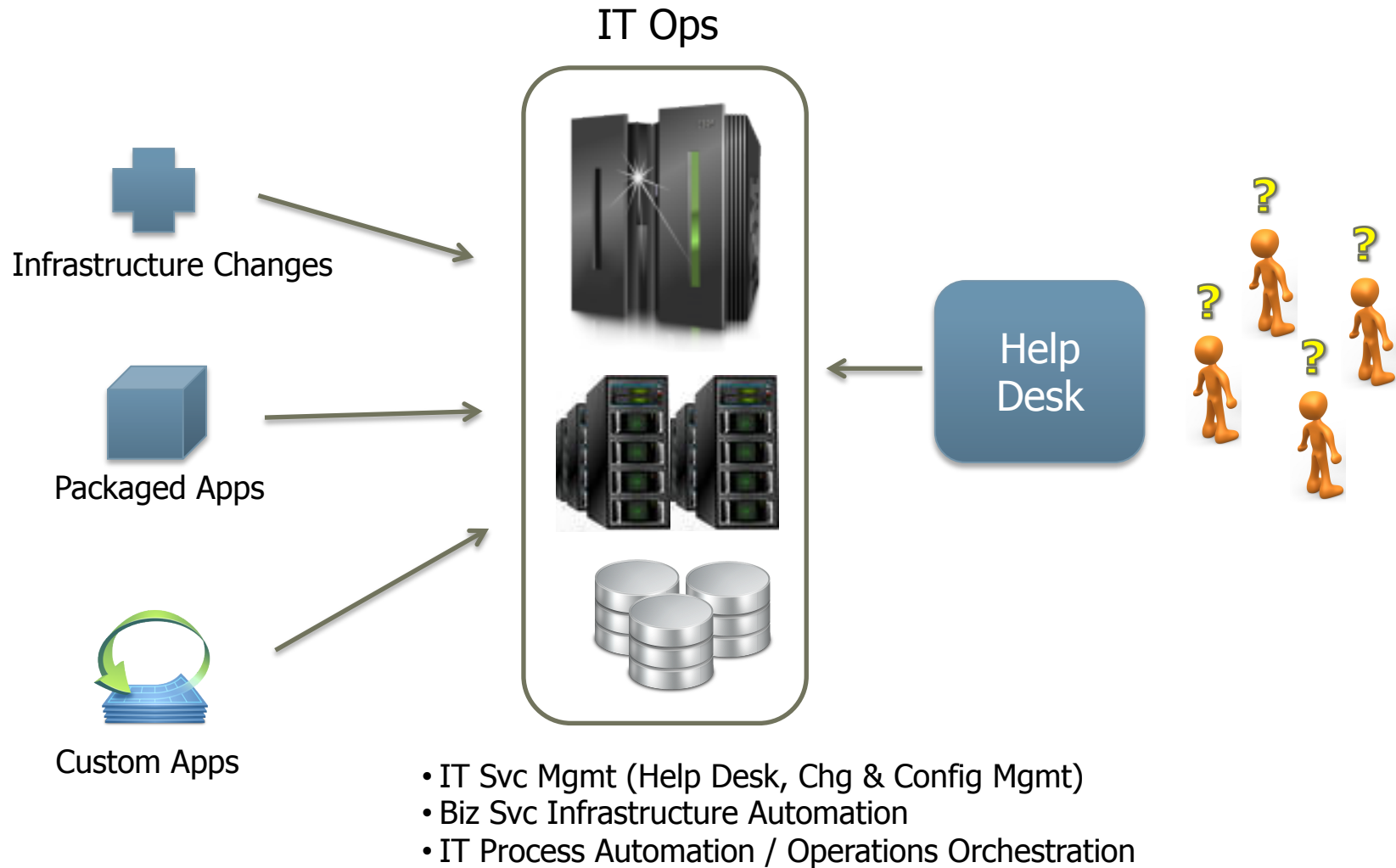
"Cost of application delivery is high and quality low"

"My IT operations group continues to struggle with release deployment into production"

"We are unable to successfully handle the increase in the number of changes we have to implement into production"

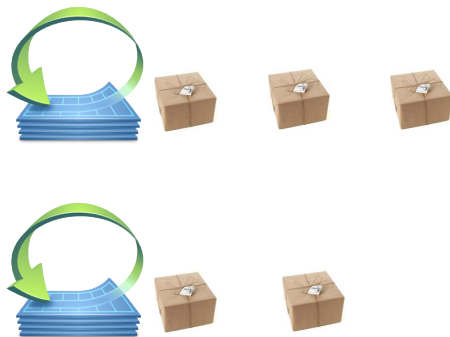"Providing support for audit and compliance is an extremely difficult task"

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In the Beginning…

IT Ops

- IT Svc Mgmt (Help Desk, Chg & Config Mgmt)
- Biz Svc Infrastructure Automation
- IT Process Automation / Operations Orchestration

Infrastructure Changes
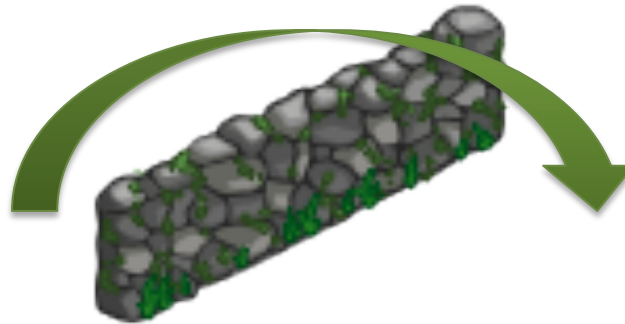
Packaged Apps

Custom Apps

Help Desk

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The Need for App Release Mgmt

App Dev

Rising app complexity, poor integration testing, frequent production failures

IT Ops

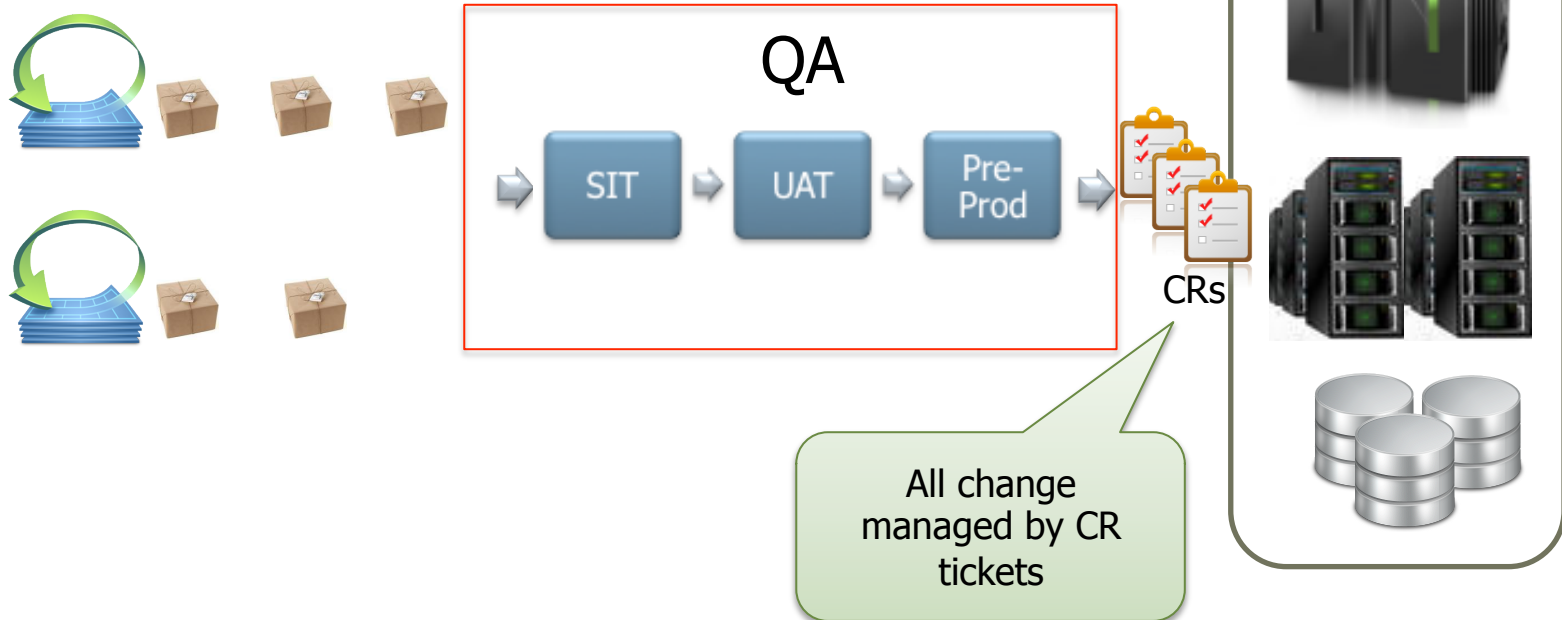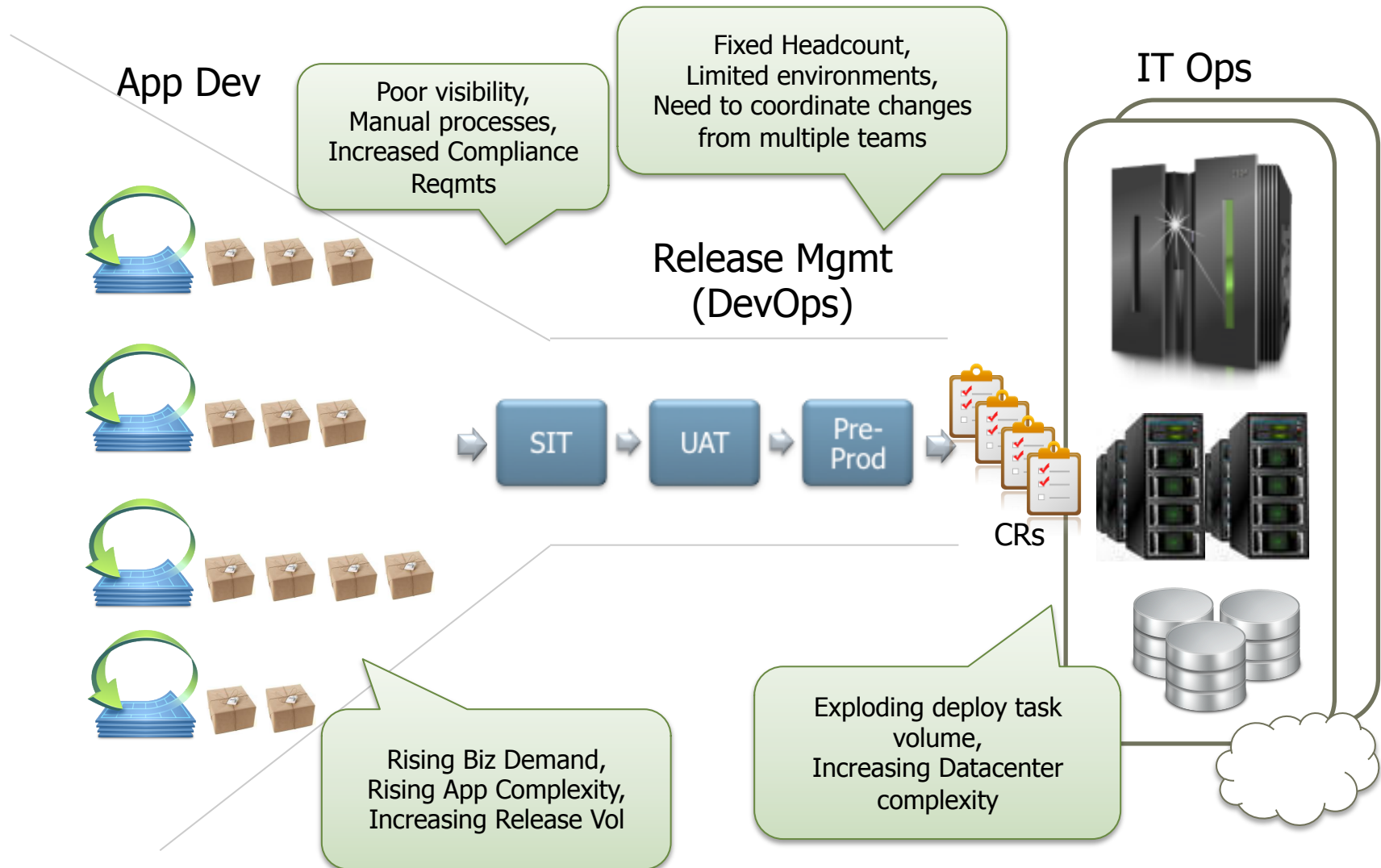80%+ of total software cost are post-deployment
- IDC May 2011

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Release Mgmt initially a QA Issue

App Dev

IT Ops

QA

SIT → UAT → Pre-Prod

CRs

All change managed by CR tickets

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App Dev

Poor visibility, Manual processes, Increased Compliance Reqmts

Fixed Headcount, Limited environments, Need to coordinate changes from multiple teams

IT Ops

Release Mgmt (DevOps)

SIT → UAT → Pre-Prod →

CRs

Rising Biz Demand, Rising App Complexity, Increasing Release Vol

Exploding deploy task volume, Increasing Datacenter complexity

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Path to Production or Obstacle Course?

- High Velocity of Change
- Across many teams
- That use different processes
- And different toolsets
- Results in poor production availability
- At a high cost of service delivery

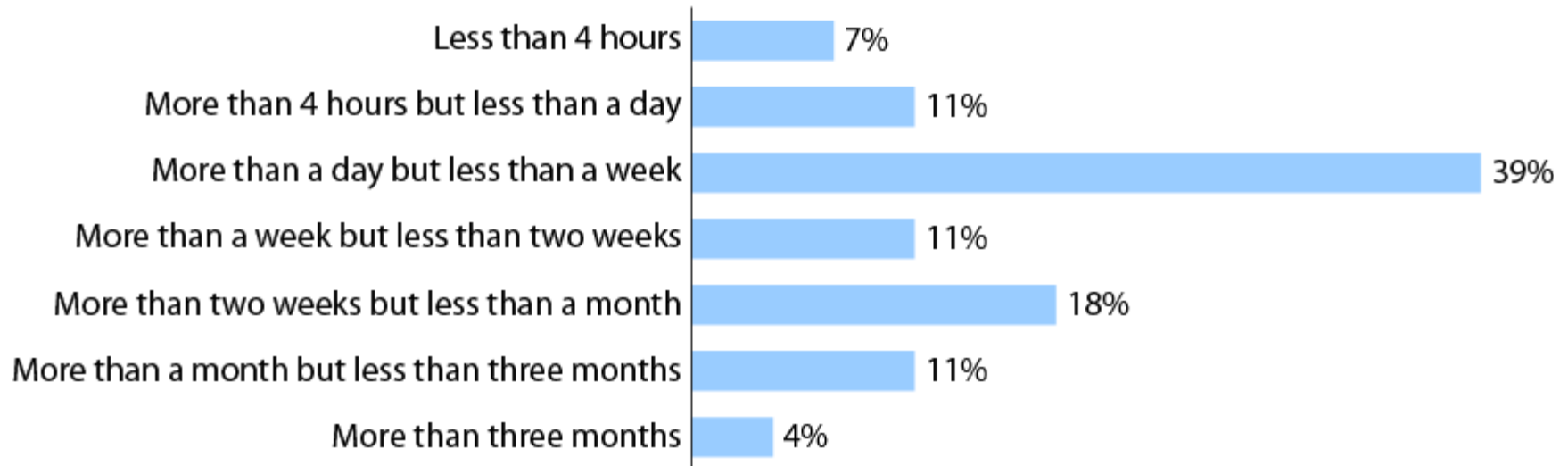*"Current release management practices and tools produce inconsistent results"*

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What is the "Null Release" ?

"If we changed one line of code in our application (or system), how long would it take us to deploy it into production using our regular release process?

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Portfolio management

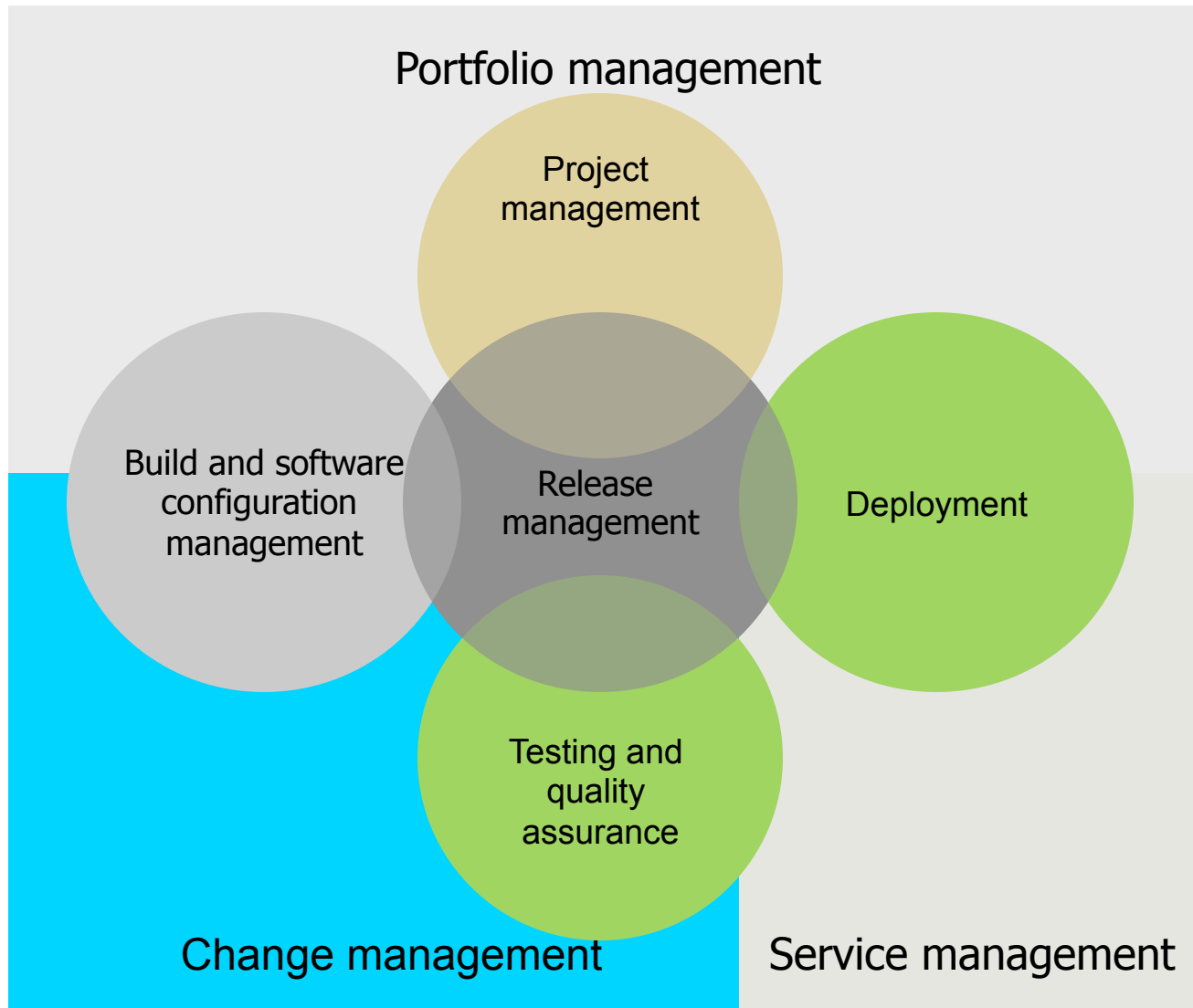Project management

Build and software configuration management

Release management

Deployment

Testing and quality assurance

Change management

Service management

Release Management Solution

Release Planning and Control

Planning · Visibility · Control

Request Portal

Reqmts Mgmt

Development Mgmt

Release Vault Deployment

Pre-Prod

Release Automation

Demand · Develop · Deploy

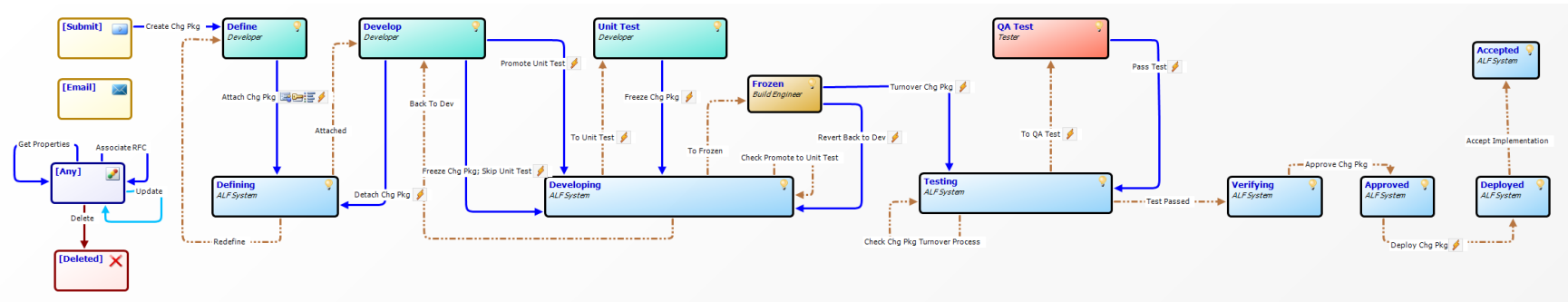SERENA
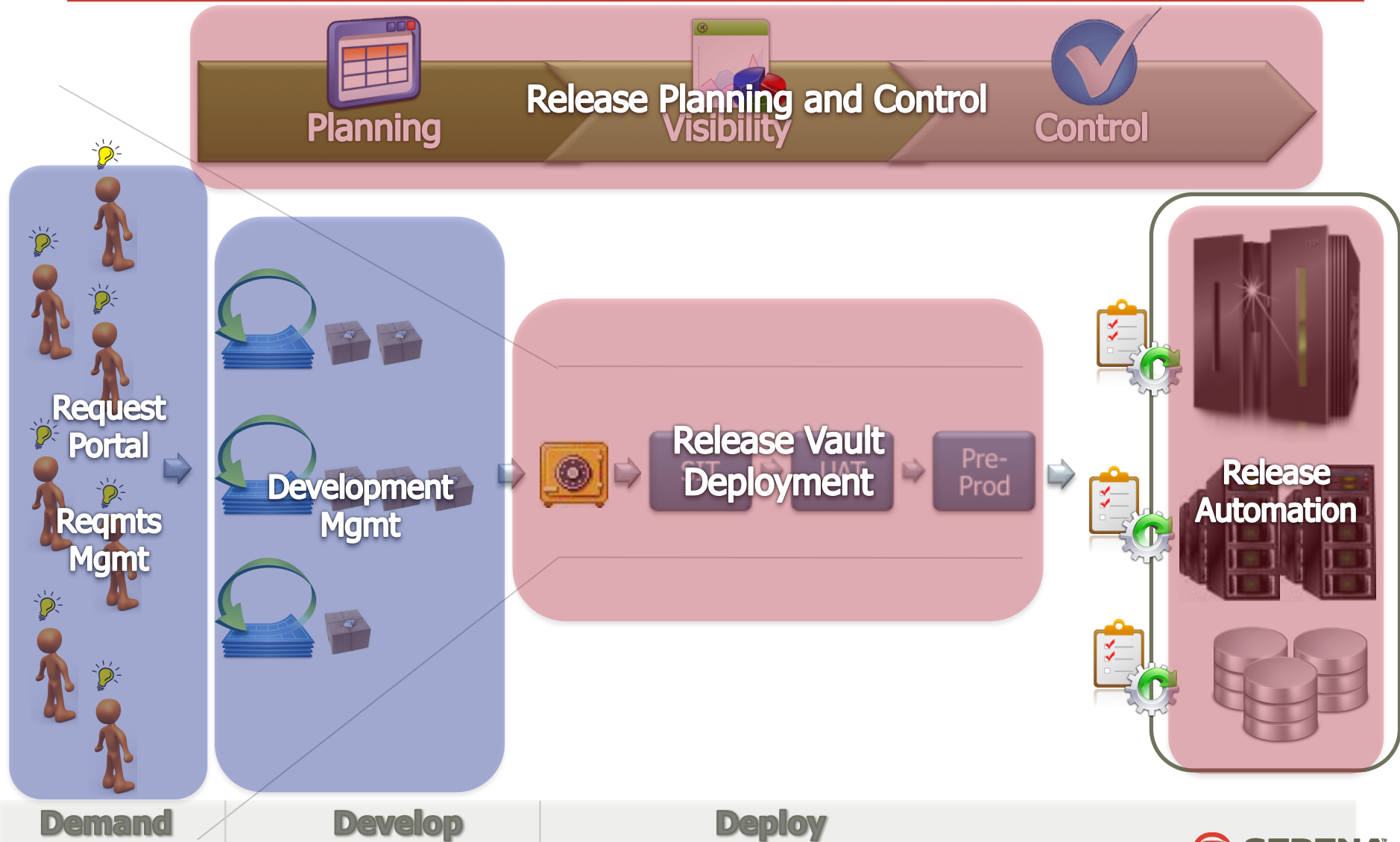
Release Planning and Control
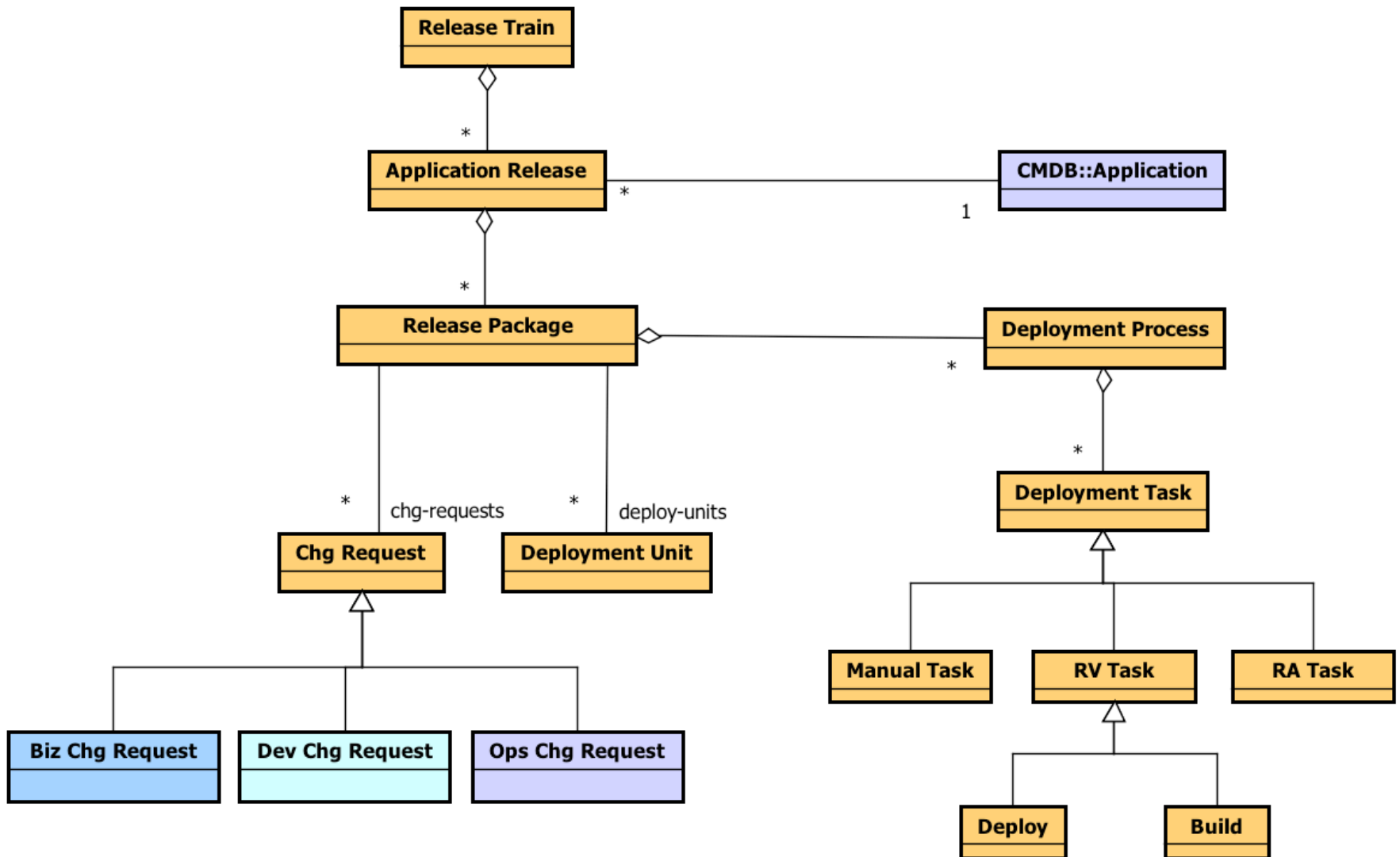
Release Management is Process and Policy Centric

- Start with process and policy
- Support the entire release management process
- Provide support for the agreed levels of traceability
- Use tools to federate and automate across the release management process rather than defining a process which fits the tools

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Domain Model

- Release Policy - agreement with the business and all relevant parties

- Release needs to be well planned in advance

- Emergency releases are managed in line with the emergency change procedure

- Risk of backing out or remediating a failed release are assessed and managed

- Success and failures of releases is measured with the aim of improving effectiveness and efficiency while optimizing costs.

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- Defined for one or more services/applications

- Naming conventions

- Types of releases

- Expected frequencies

- Building the test environment

- What are the backout plans?

- Gate review criteria

- Approach for grouping and prioritizing changes

- Roles and responsibilities

- Entry and exit criteria for each process transition state
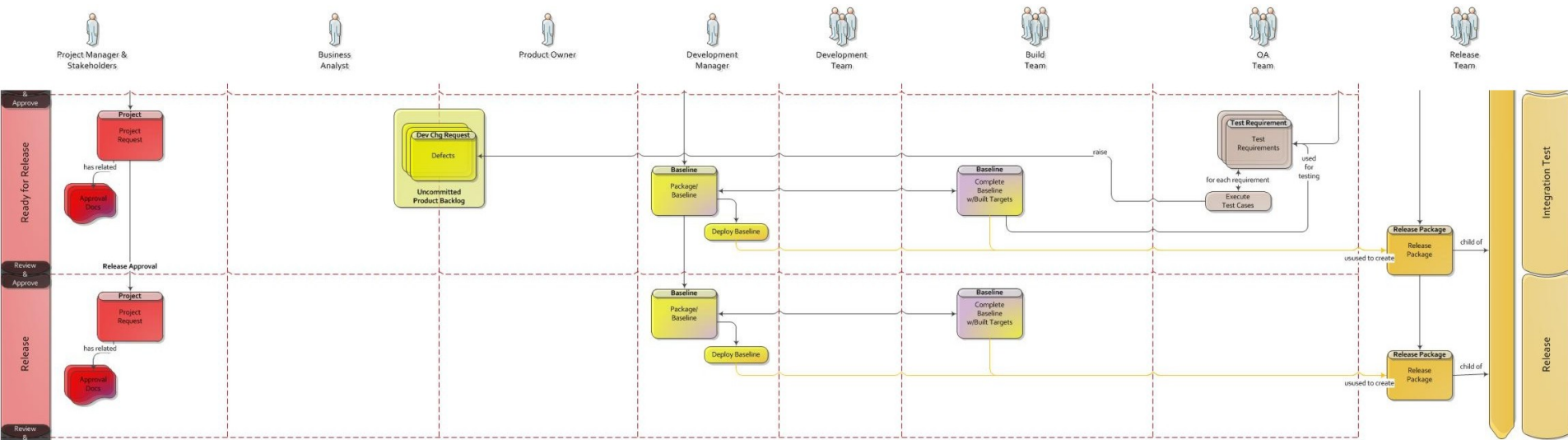
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- Composed of state names and date/time fields.

- Should be tied to a release type.

- Types might be major, minor, emergency..etc.

- Associated with specific high level workflows.

- Information for enforcement, notification and reporting

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Release Calendars
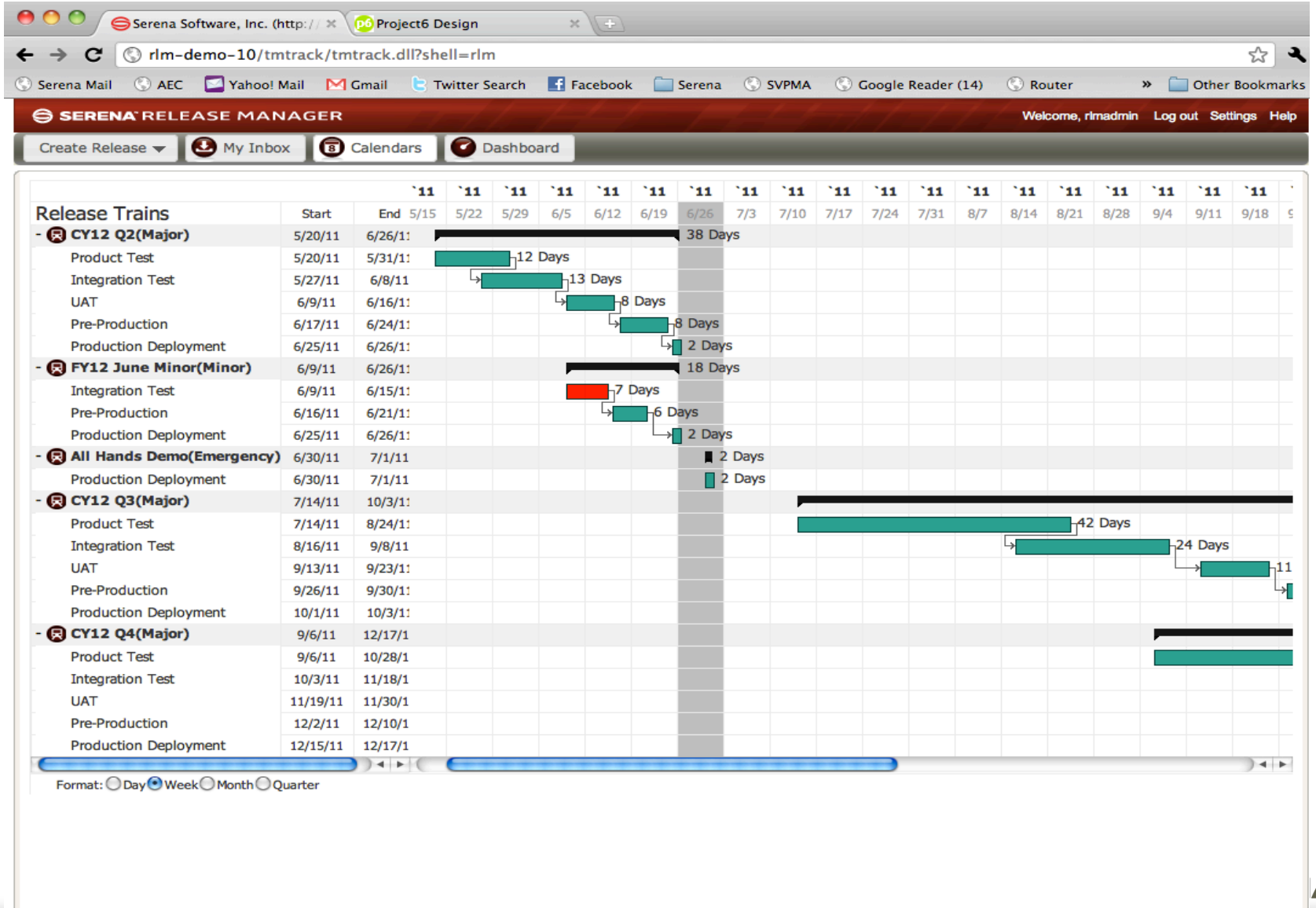
Coordinate Activities and Roles

Planning and Control Best Practices

- Ensure Demand, Change and Configuration Management is robust!

- Establish a release policy

- Publish a release calendar

- Get business sign off and provide stakeholder visibility

- Agree on KPIs up front (release policy)

- Calculate impact analysis, providing visibility into interdependence tasks

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Planning and Control Best Practices

- Coordinate activities of individuals who are involved in making that release happen

- Identify and approve list of tasks and activities required to deploy releases into environment

- Design and plan out the process flow to enable all the tasks to be performed/approvals to be obtained in the correct order within the allotted time window

- Provide real-time status alerts and updates on those activities

- Build a common library of repeatable tasks and processes to speed future release processes

Metric Reporting and Dashboards
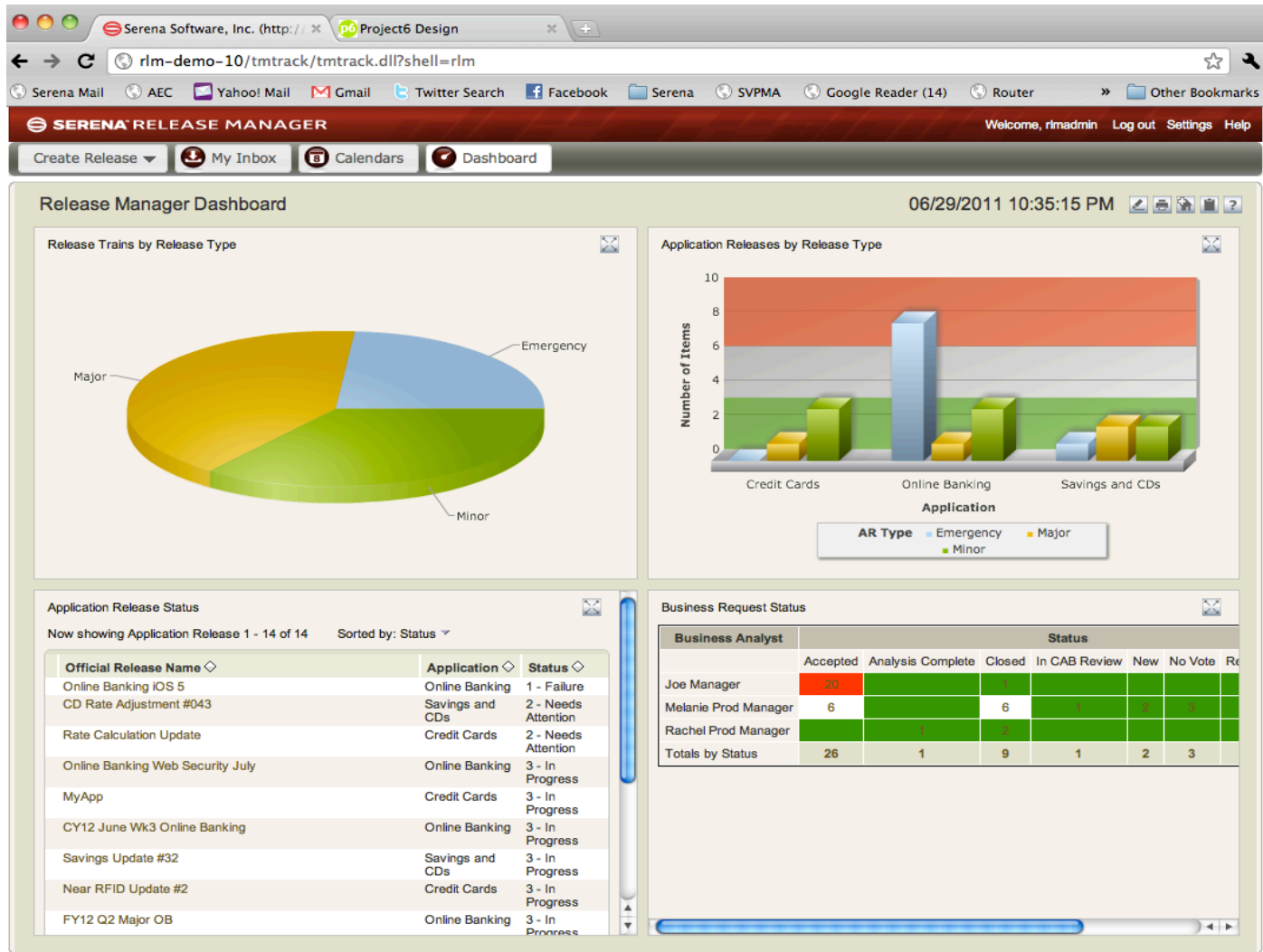
Release Management Metrics

- Number of RFCs raised
- Percentage of emergency releases (Submission rate)
- Number of changes made by the release team
- Number of successful installations
- Number of builds/deploys aborted
- Percentage of installs performed on schedule
- Number of failed or backed out releases

- Number of unauthorized changes deployed to production
- Resource cost per release
- Service time lost due to release activity
- Number of defects per state, team, release unit, release
- Percentage of gates missed per team
- Average time in process state

Release Management Summary

Focus on Process and Policy First

Leverage ITIL

You don't have to "Rip and Replace"

Automate and optimize where possible

Ensure 'end to end' traceability

Measure, manage and report

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Thank You

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