Application Delivery:

Process Automation (PAM)

Product Roadmap

agility
made possible™

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agenda

— Process Automation Overview

— CA PAM Roadmap

— CA PAM 4.1 SP1 Highlights

CA Process Automation Overview

why automate?
people automation

— People are the main reason IT projects fail
— IT cannot be successful if there are too many people involved

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what is process orchestration?

Reboot Web Server

Upgrade SQL Server

Restore Backup

Patch Oracle

Backup Exchange

Open Ports

Unix Clever chap

Linux Smart Bloke

Network Boffin

Security Guru

Operations Manager

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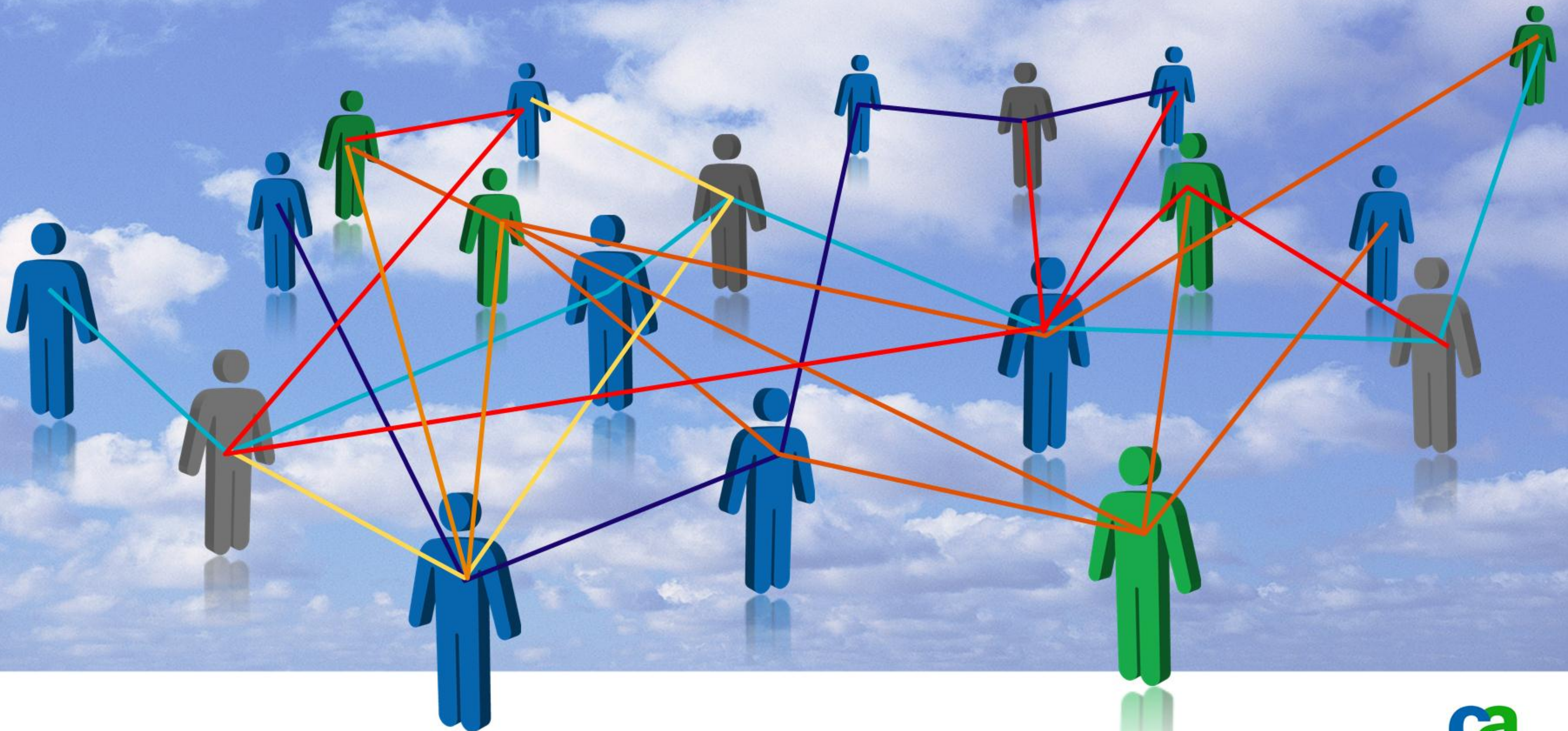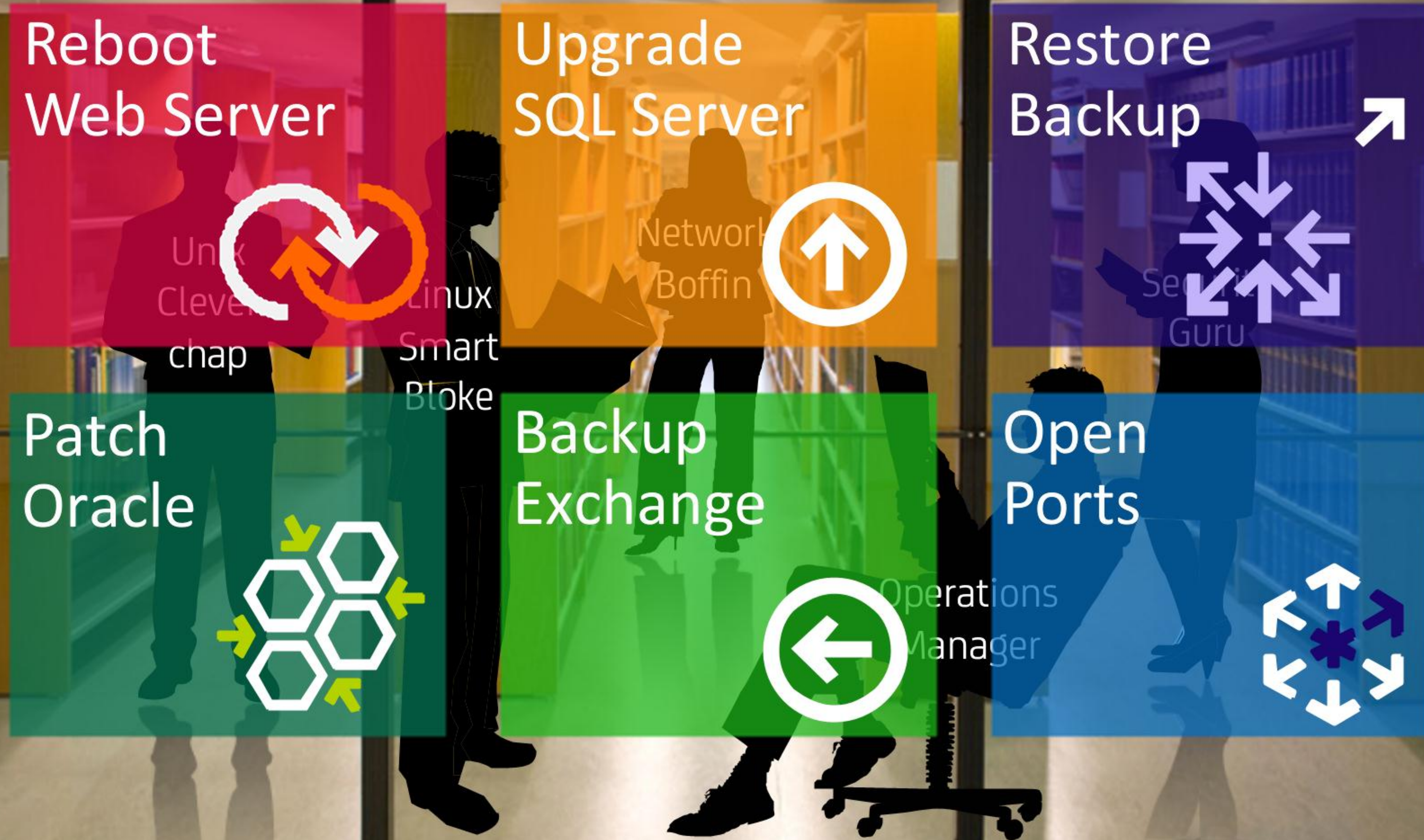
what is process orchestration?

Let's build a House

Building site

Carpenter

Plumber

Bricklayer

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what is process orchestration?

Process Orchestration

Toolset Automation

Lets' build a House

Building Site
Data Center

Server
Carpenter
Management

Network
Plumber
Management

Storage
Bricklayer
Management

Site Architect

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CA Process Automation Overview

CA Process Automation enables enterprises to design, deploy and administer automation of manual, resource-intensive and often inconsistent IT operational procedures.

Visual Designer

- Visual authoring speeds and simplifies automation from concept to production
- Library of hundreds of automation objects enables rapid design

Scalability and Availability

- Execute hundreds of processes simultaneously

Integration

- Large supply of 3rd party connectors provides integration with popular IT systems

Seamless Authentication

- Seamless authentication to CA Process Automation using Windows credentials

Process Documentation

- Generate PDF-based documentation of essential process information

Common Script Editor

- Rich scripting experience for various types of scripting and markup languages

Best-in-Class Security Model

- Provides unmatched control for runtime security and permission` setting
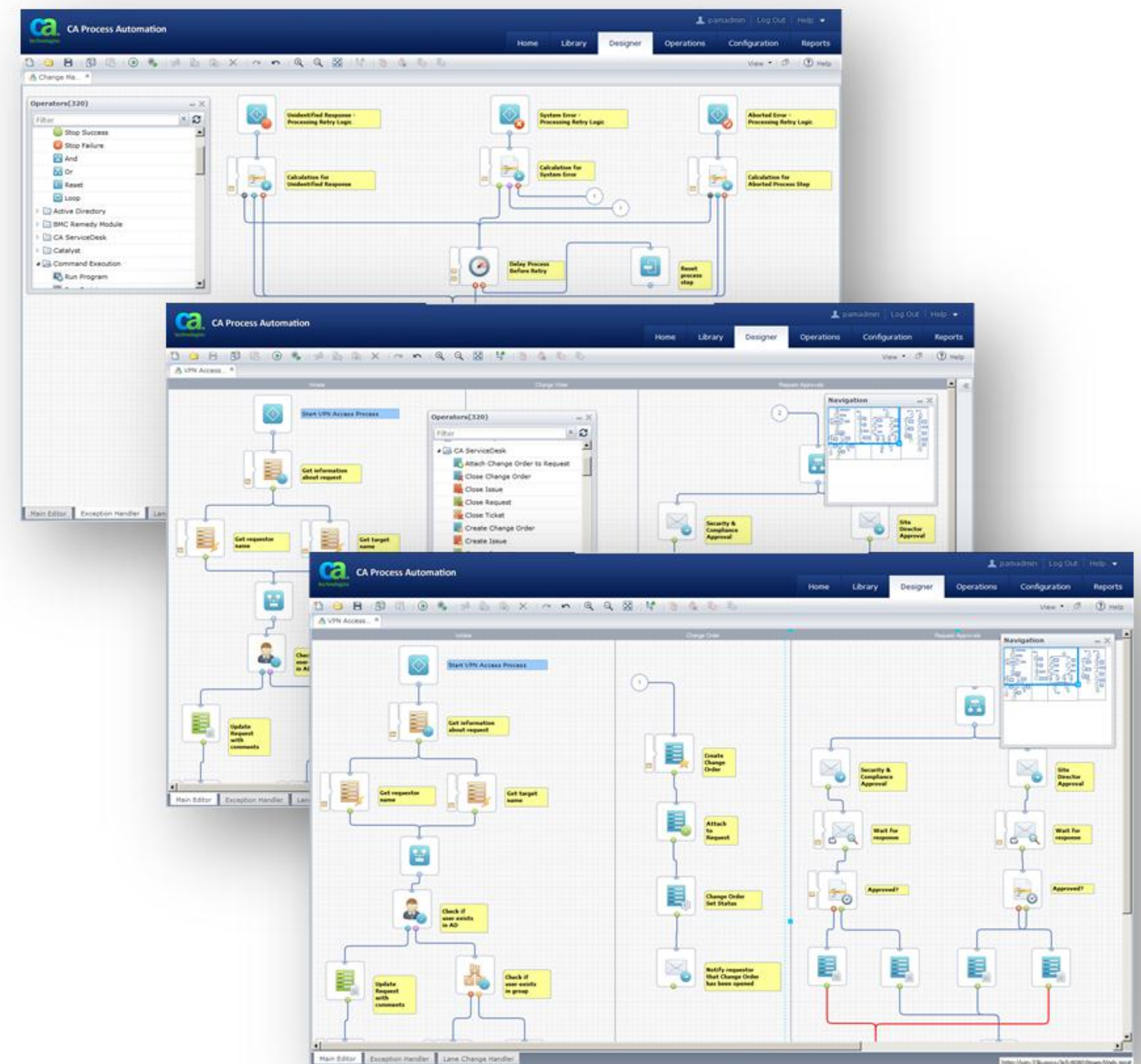
CA PAM Roadmap

CA Process Automation product vision

Solution Lifecycle Management	Provide greater operational visibility and analysis of the orchestrated solutions designed and deployed within PAM
Simple Orchestration	Accelerate the time-to-value of deployments by making design and configuration features easier to use
Component Enabled	Deliver a core set of standardized orchestration services and deployment models for easier consumption by adopting products and solutions
Scale & Performance	Reliably execute and manage mission critical IT processes in large enterprise data centers

Evolution of "RBA" technology

Composite
Application
Development
Acceleration

Orchestration

Runbook Automation

Job Scheduling / Workload Automation

... 1980 ... 1985 ... 1990 ... 1995 ... 2000 ... 2005 ... 2010 ... 2015

Common needs for composite applications

Development		System	Integration	Performance	UAT...

BizLog	UI	Int	Rem Exe	Users	Errors

Application Architects & Designers must size requirements

Is there core business logic to be coded?

BizLog

Core business logic and UI needs drive core sizing

Is user interaction required and to what extent?

UI

Is integration to external systems & apps needed?

Int

Supporting requirements will **improve robustness** and **increase user satisfaction** but will **lengthen development cycle**

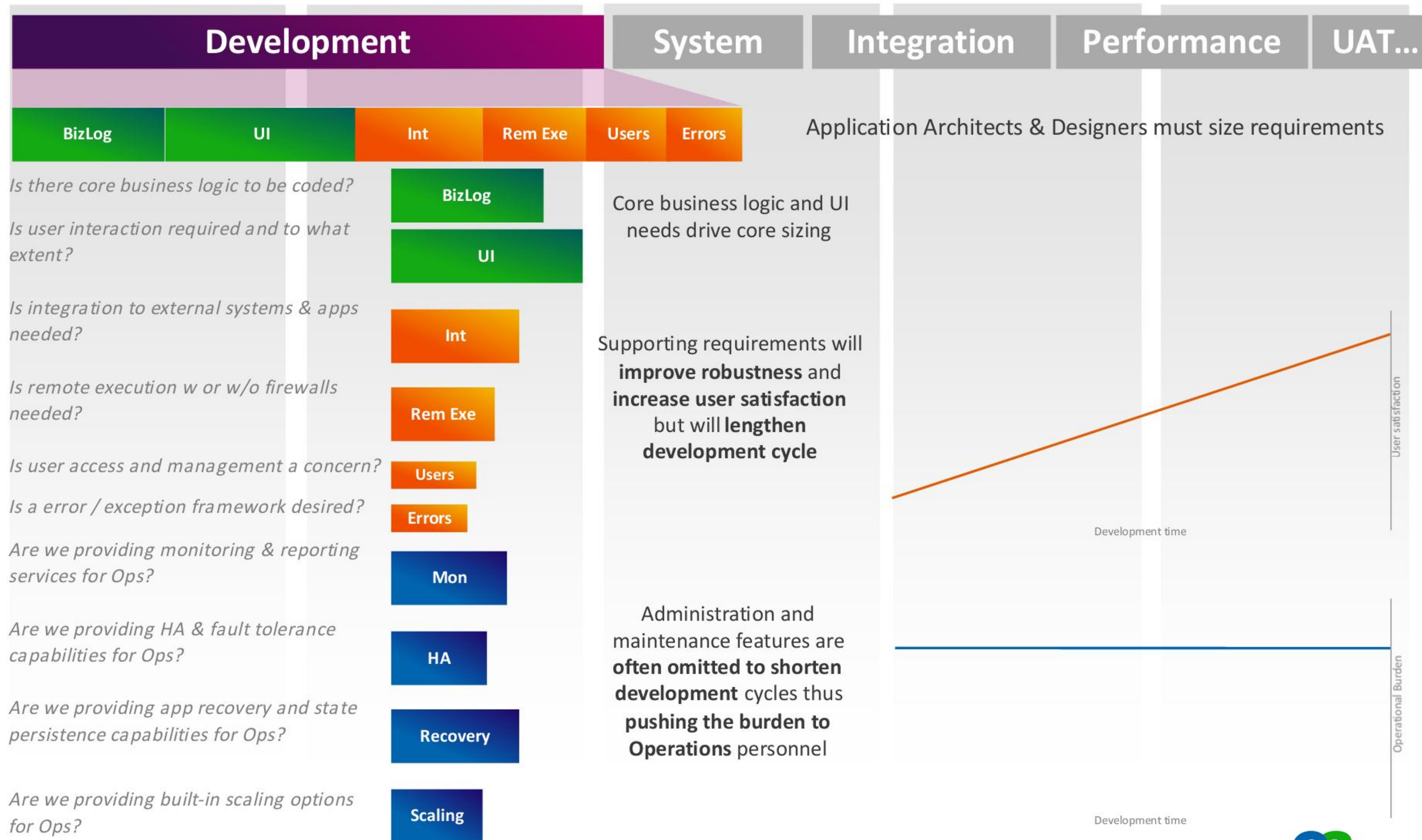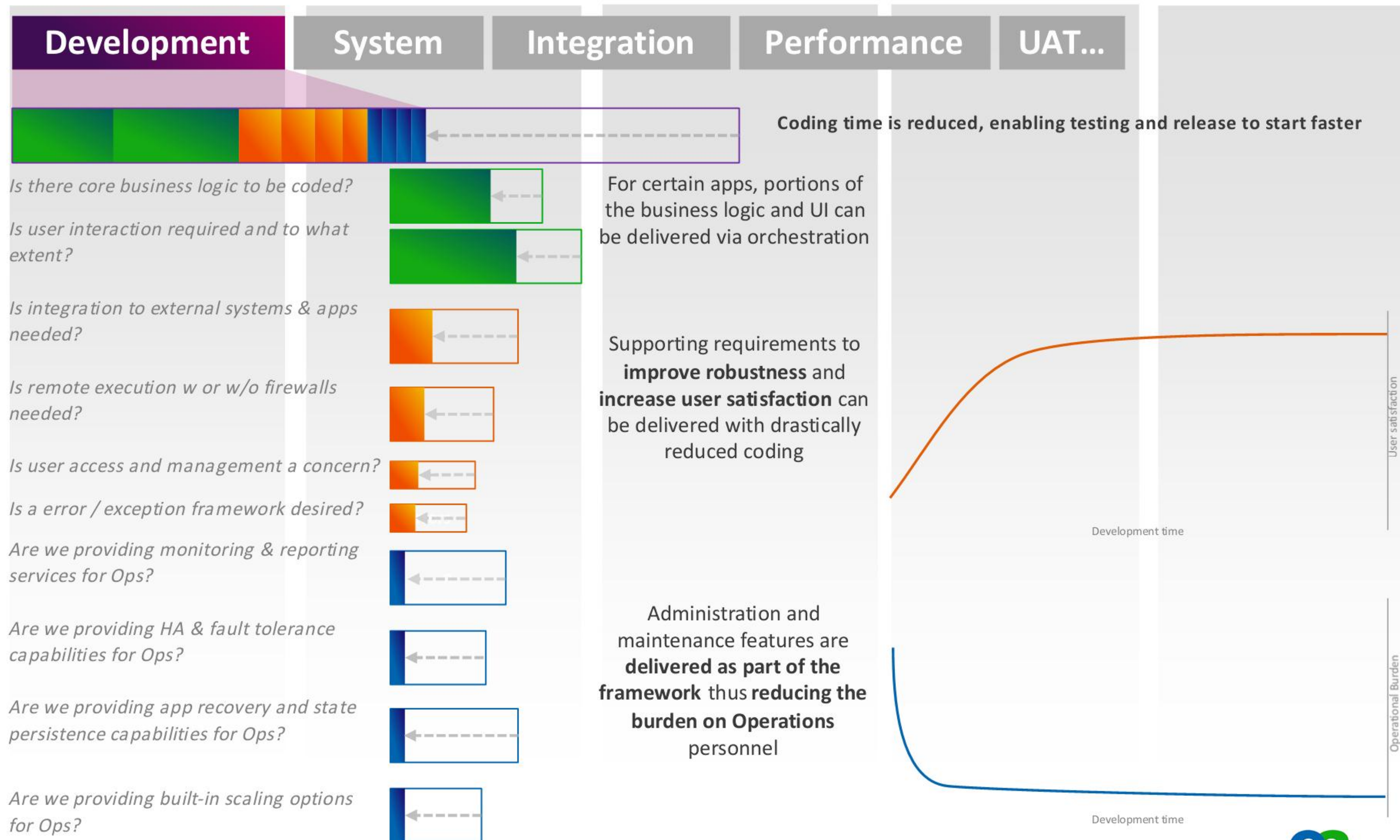*Is remote execution w or w/o firewalls needed?*

Rem Exe

Is user access and management a concern?

Users

Is a error / exception framework desired?

Errors

Are we providing monitoring & reporting services for Ops?

Mon

Administration and maintenance features are **often omitted to shorten development** cycles thus **pushing the burden to Operations** personnel

Are we providing HA & fault tolerance capabilities for Ops?

HA

Are we providing app recovery and state persistence capabilities for Ops?

Recovery

Are we providing built-in scaling options for Ops?

Scaling

User satisfaction

Development time

Operational Burden

Development time

13

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accelerate development and simplify operations
enables "shift-left" actions to start sooner

Development	System	Integration	Performance	UAT...

Coding time is reduced, enabling testing and release to start faster

Is there core business logic to be coded?

Is user interaction required and to what extent?

For certain apps, portions of the business logic and UI can be delivered via orchestration

Is integration to external systems & apps needed?

Is remote execution w or w/o firewalls needed?

Supporting requirements to **improve robustness** and **increase user satisfaction** can be delivered with drastically reduced coding

Is user access and management a concern?

Is a error / exception framework desired?

Are we providing monitoring & reporting services for Ops?

Are we providing HA & fault tolerance capabilities for Ops?

Administration and maintenance features are **delivered as part of the framework** thus **reducing the burden on Operations** personnel

Are we providing app recovery and state persistence capabilities for Ops?

Are we providing built-in scaling options for Ops?

User satisfaction

Development time

Operational Burden

Development time

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Roadmap: *CA Process Automation*
Beyond Release 4.1 Timeline as of September 2013

STRATEGIC INTENT: *Act as the central synchronization point for the management of key IT processes in the enterprise and enable the creation of orchestration based solutions by CA and it's customers.*

	EXISTING	PLANNED	UNDER CONSIDERATION
PRODUCT /RELEASES	Process Automation r4.1	Process Automation r4.2	Process Automation r4.3
MARQUEE FEATURES	• New common script editor • Automated Documentation Generation • NTLM based Pass-Through Authentication (Windows SSO)	• Solution level content management • General Performance Improvements I • Updated Agent Management I • Clustering stabilization & simplification • CA Platform Support	• Orchestration oriented Application Design & Management • General Performance Improvements II • Updated Agent Management II • Customer Usability Features & Enhancements • SaaS Platform Support

2012   **2H '13**

Planned for 4.2

— **Orchestration Execution & Capacity Improvements**
To support mission critical production deployments on the 4.x code base, a variety of improvements and enhancements targeted at improving the overall reliability of the development and execution environments. Additionally, significant advancements will be made in terms of the capacity for process execution.

- **General Performance Improvements**
- **Clustering Improvements Part I   (Primary role removal, general hardening)**
- **Database Optimization Part I (***footprint reduction – reporting purging option only***)**
- **Agent Scalability & Management Part I (Orchestrator <-> Agent comms)**
- **Installation and Update Simplification**
- **Additional Refactoring Part I (library browser)**

— **Enhanced Content Management**

As users are increasingly leveraging PAM to create "consolidated content" or "automated solutions" they need capabilities to create, deploy, and manage this content as a single entity versus a collection of content items.

- **Consolidated Content Packaging and Update Support**
- **Consolidated Content Operational Management Support**
- **Content Metadata Enhancements**

*NOTE: Items in blue include all or some portion of a CN Rail Enhancement Request

Key epics under consideration for 4.3

- *Solution/Application oriented Design & Management*

- *Community connector development enablement*

- *Upgrade & Abstraction of JBOSS (pushed to 4.3 with abstraction only)*

- **Clustering Improvements Part II   (Master role removal, general simplification)**

- **Database Optimization Part II (footprint reduction, transaction optimization)**

- **Agent Scalability & Management Part II (*UI management*, General agent communications enhancements)**

- **Additional Refactoring Part II (dataset viewer)**

- **Improved & Simplified Remote Execution Target Management**

- **CA SaaS Platform Interoperability**

- **Select Feature Enhancements & Improvements (Customer Enhancement Requests and key deferred features)**

*NOTE: Items in blue include all or some portion of a CN Rail Enhancement Request

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CA PAM 4.1 Highlights

Improved User Experience

Building on the advancements made in the 4.0 release of Process Automation, we plan to continue to improve the overall interaction experience for users authoring, deploying, and administering processes in PAM.

- **Automatic Documentation Generation**

  It's now possible to generate PDF documentation of processes including details on each operator and it's parameters as well as an image of the process flow.

- **NTLM pass-through authentication (Windows based SSO)**

  In addition to supporting SSO through SiteMinder, PAM can be configured to support NTLM pass-through authentication via EEM.

- **Duration and Progress Specification and Monitoring**

  An anticipated duration can now be specified for a process, enabling monitoring of expected vs. actual duration of processes.

  Also, designers can indicate progression points within a process definition and when the process executes, a progress indicator will be updated in the Operations tab.

Enhanced Design Elements

We are enhancing and adding a variety of elements targeted at process designers in order to reduce the time required to create processes while improving the quality of the processes created.

- **Improved Script Editor**

  Instead of a plain text editor, PAM now uses a language aware script editor that supports keyword highlighting for the base language (e.g. JavaScript) as well as PAM specific keywords and functions.

- **XSLT Operator**

  An XSLT Operator has been added to the connector inventory to support XML transformations.

- **Configuration Specification for Custom Operator Groups**

  Now it's possible to create general configuration options for a group of custom operators. Custom operator designers can create a set of common parameters that can be specified by users that will be applied across an entire group of custom operators.

General

- **RESTful API Support**

  In addition to the existing SOAP based Web Services API, a new RESTful based Web Services API has been added for programmatically interfacing with PAM.

- **Forms Enhancements**

  Enhanced forms editor now supports drag and drop as well as new JavaScript methods to enable populating form elements from common SOAP and RESTful APIs.

- **Content Metadata**

  Content Designers can now specify release information (name & version) for a set of automation objects. This information will be retained on import into other Automation libraries thus making it easier to verify consistency between versions across disparate Orchestrators.

Thank You!

Question & answer

CA Process Automation product strategy

Our goal is to accelerate IT service delivery by providing:

— **Rapid Time To Production.** A comprehensive solution optimized for faster time to production through full lifecycle support (authorship, deployment, administration) of automated processes and solutions

— **Rich content and design constructs.** Enabling the representation and execution of the widest range of IT processes by delivering the broadest set of automation constructs and pre-defined content

— **Extensive integration.** Integration and extensibility capabilities that empower organizations to incorporate new and proprietary applications and systems into their orchestration solutions at their own pace if necessary

— **Scalable and High Performance Architecture**. A superior cross-platform, industrial strength solution that can scale from an embedded workflow engine for a single application to an enterprise wide automated solution delivery system
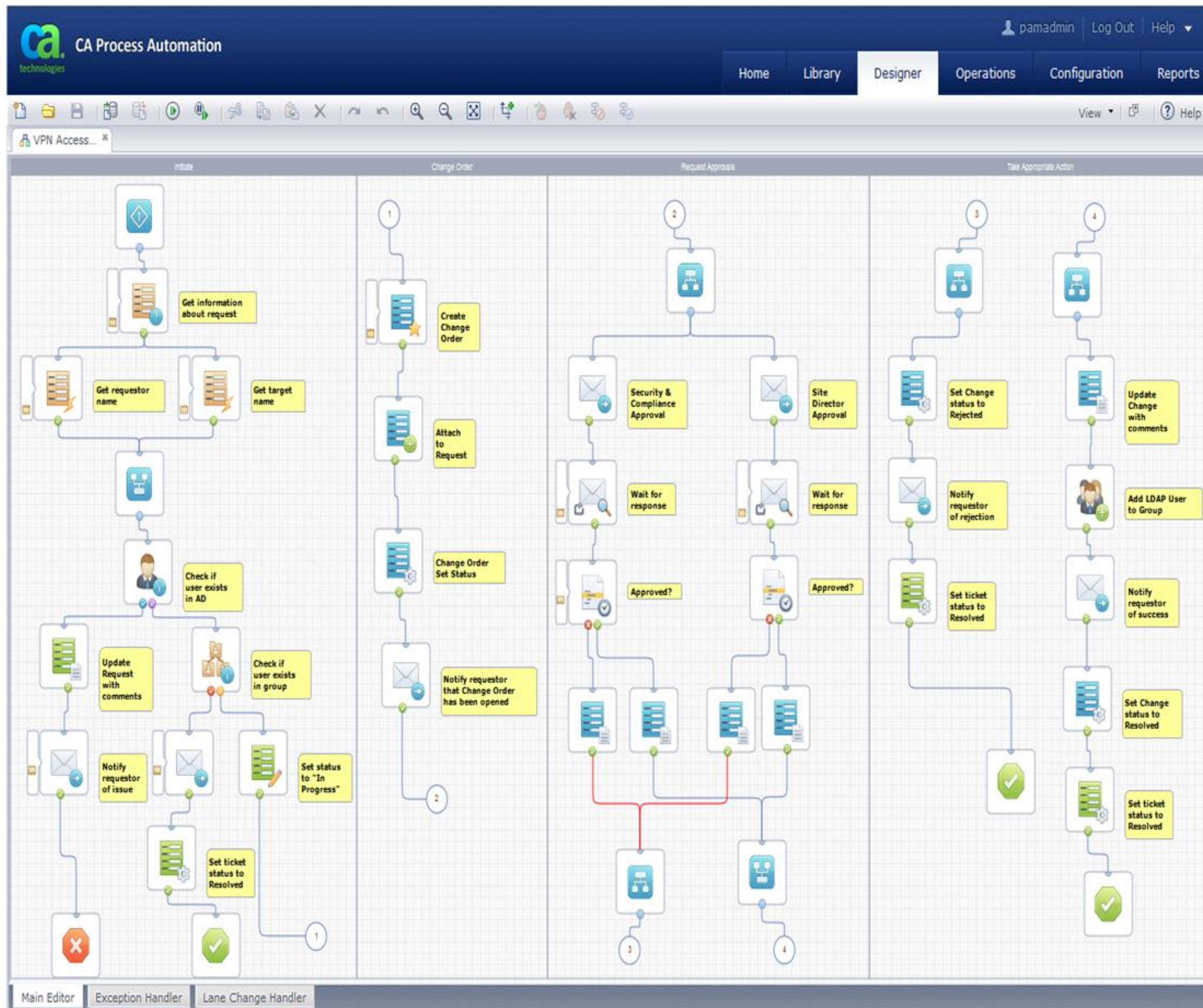
Built to Go Fast
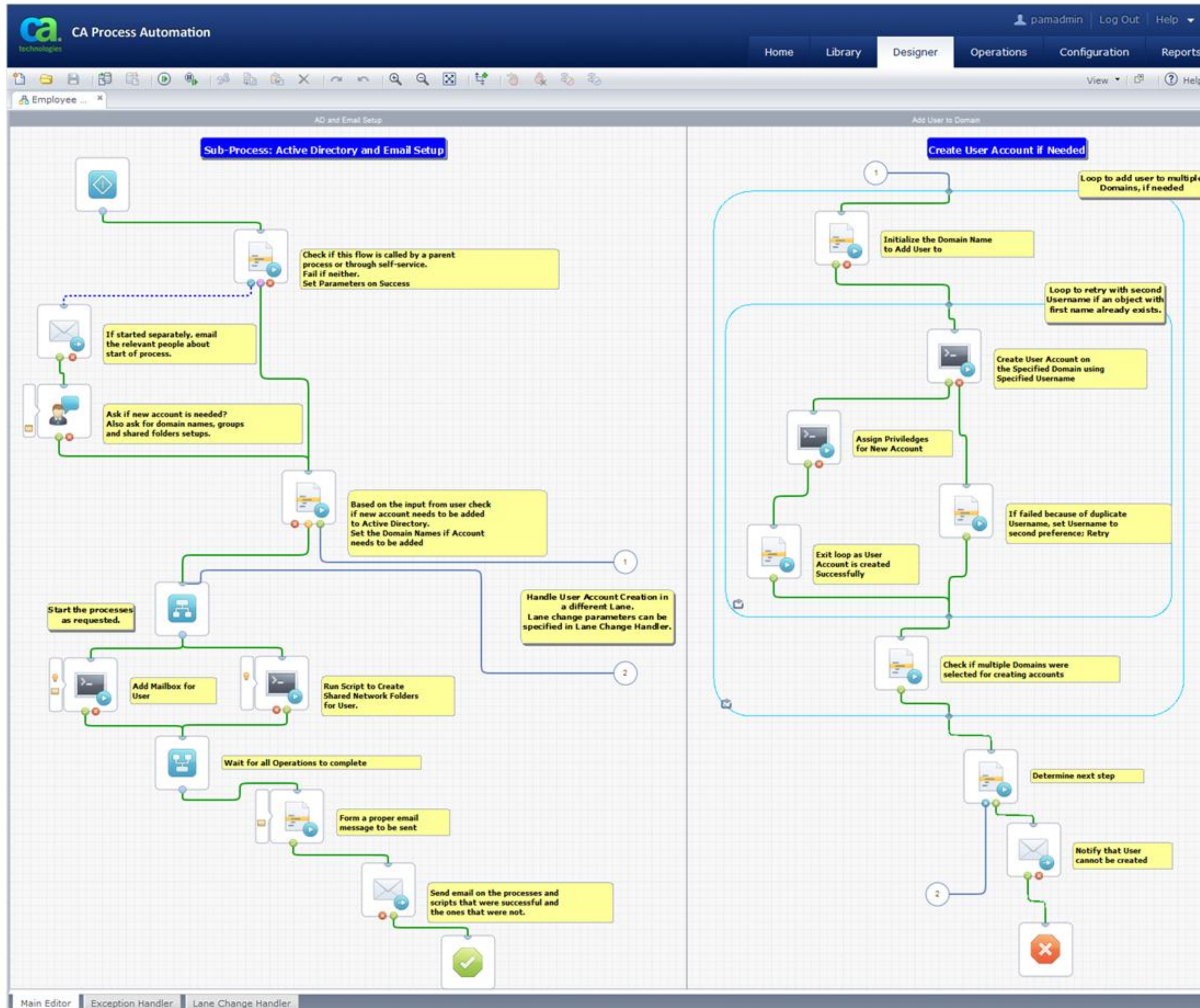
— Visual authoring

— Unifying cockpit and repository

— Reusable content

— Pre-engineered integrations and process flows

— Testing tools

— Multi-site deployment capabilities

— Run-time remediation

— Built-in and extensible exception handling

Built to Scale

— Unique architecture for scalability (scale up & out)

— Designed for high availability

— Fine grain, inheritable security

— Can be agent based or agentless

Built to Adapt
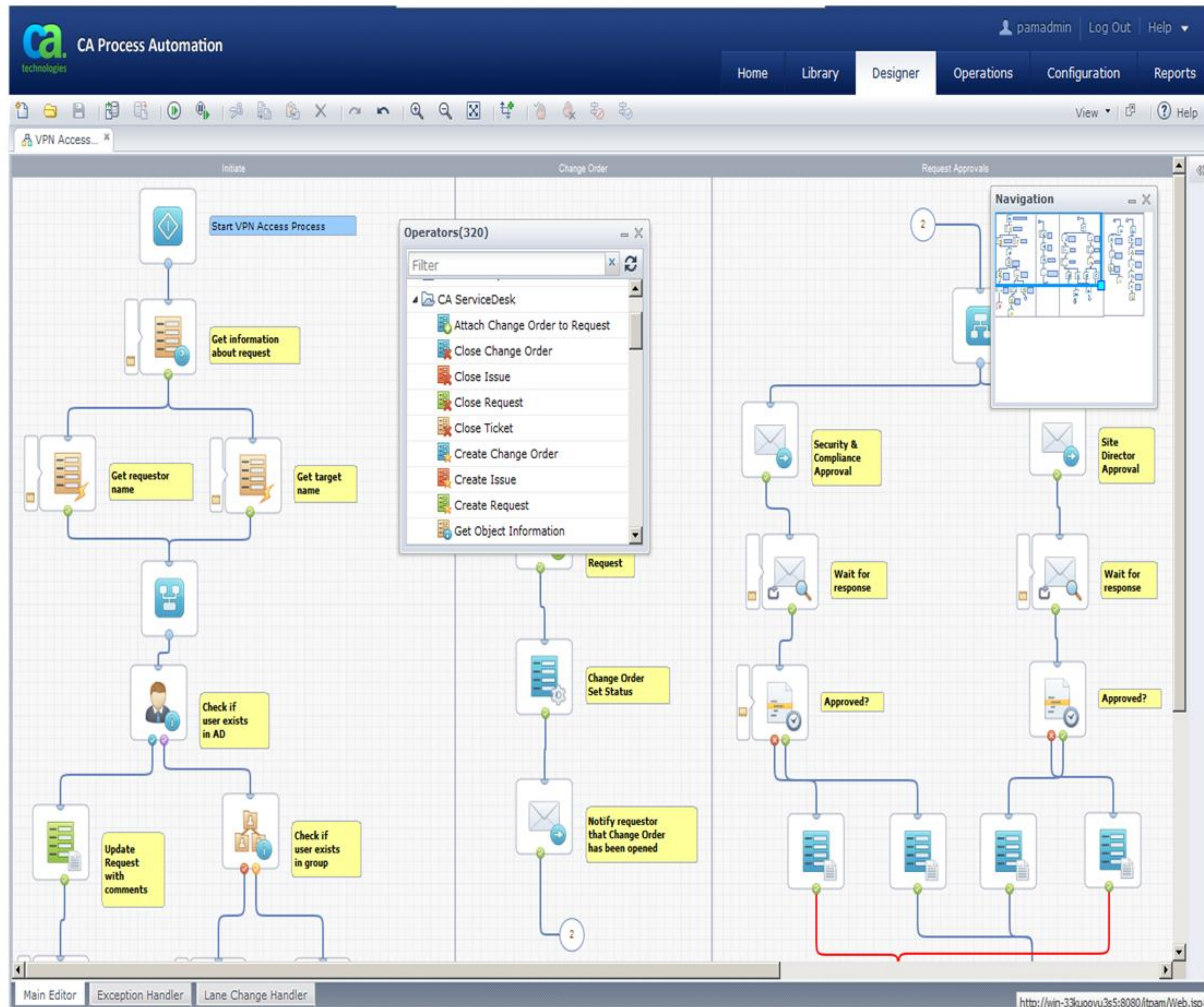
- Shared technology across CA Technologies (embedded in ITSM tools and CA automation suites)

- Embeddable UI

- Robust integration protocols

- Existing automation can be easily wrapped and made available for "longer chain" orchestration

- Designed for extensibility (web service-based arch)

Roadmap: *Epics Currently Planned or Under Consideration*

1. ***Performance Improvements*** - As a PAM user or Orchestration Service consumer I want far greater performance (e.g. process throughput) from each PAM cluster node that I deploy so that I can use less hardware for higher load scenarios and derive better ROI.

2. ***Reliable Clustering*** - As a PAM customer or Orchestration Service consumer I want my orchestration capability to support simple, reliable clustering for both scalability and high availability (no single point of failure) so that I can reliably deploy orchestration in enterprise production environments and use industry standard load balancers.

3. ***Enhanced Agent Management*** - As a PAM User or Orchestration Service Consumer I want to have reliable, resilient and scalable communications between agents and orchestrators that does not require punching holes in firewalls so that I can deploy and manage a large number of orchestration agents in flexible deployment scenarios including orchestration from the cloud, MSP multi-tenant, agents behind NAT'ing firewalls etc..

4. ***CA SaaS Platform Support*** - As CA solutions creator I want PAM to meet the various codes of conduct and interoperability standards of the CA Platform so that I can deliver easy to consume solutions that require orchestration capabilities.

5. ***Solution Content Management*** - As CA solutions creator I want to control the PAM content lifecycle so that solution consumers can easily deploy, update and manage orchestration content.

7. ***Remote Execution Refactoring*** - As a PAM User I want a scalable, comprehensive, yet easy to understand and navigate model for configuring and selecting operator execution targets so that I spend less time carrying out such tasks in the UI.

8. ***Connector usability enhancements*** - As a PAM content designer I want to have easy to use and fully functional connectors so that I can rapidly create automation content that orchestrates and integrates target systems and applications through a wide variety of generic protocols.

9. ***Event – Incident Synchronization Power Pack*** - As a CA IM , APM or SDM user I want to integrate my monitoring solution with my service desk so that I can enforce best practices for responding to problems through automated ticketing for reduced MTTR and improving overall IT efficiency across Operations, Service Desk and other teams.

10. ***IM automated diagnostics/remediation Power Pack*** - As an IM user I want to leverage orchestration to enforce best practices for responding to problems through automated ticketing, diagnostics and remediation so that I reduce MTTR and improve IT efficiency across Operations, Service Desk and other teams.

11. ***Object Dependency Mapping*** - As a PAM content designer I want to be able to identify the dependencies on an automation object so that I can easily determine the impact of changes to that automation object

12. ***BPMN Interoperability*** - As a content designer I want to be able to move content between an industry standard business process modeling tool and PAM so that I can reuse content, exploit product capabilities and leverage human skills in both areas.