

# Accelerate Cloud deployments with Expert Integrated Systems

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## Many of our clients are at critical IT decision points



- Business demand for new workloads – mobile & mobility, social, big data analytics
- Business expansion / acquisition / divestiture
- Implementation of large application packages or major upgrades
- Risk and compliance issues due to version currency or security concerns
- Need for dramatic cost savings
- Growing competition from more responsive alternative delivery models

**The decisions you are making today will stay with you for many years.  
Are you sure your organisation is heading in the right direction?**



# Cloud adoption is one approach to dealing with the challenges faced by IT today

Improves the agility & dexterity of business



Speeds delivery of product & service innovation

Delivers IT without boundaries



Enables new business models & client relationships

## Lowens Complexity & Changes the Economics of IT





Open flexibility is required in cloud delivery, integration, and use



← Workload Portability →

 **Common Cloud Management Services → open standards reference model**

# IBM PureSystems accelerate new cloud deployments



## Starting points for: Infrastructure-, Platform-, Software-, and Business Process-as-a-Service

- Virtual Servers
- Virtual Desktop Infr.
- Application platform
- Mobile and Social Apps
- Managed storage
- Backup/DR
- Development / test
- Analytics / DB services

### PureFlex

Express / Standard / Enterprise



**Flex System**



### Infrastructure

Delivering Cloud Infrastructure Services

### PureApplication



### Application Platform

Delivering Cloud Application Platform Services

### PureData

for Transactions / Hadoop / Analytics / Operational Analytics



### Data Platform

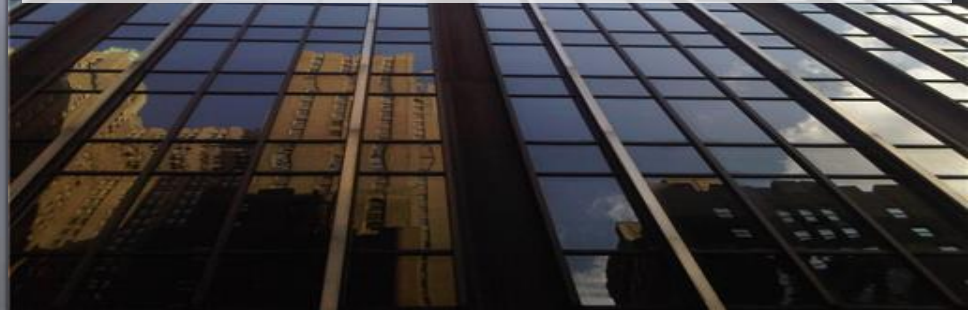
Delivering Big Data Platform Services

# IBM PureSystems case studies



A Brazilian Bank selects IBM PureSystems to support 37k ATMs reducing operational and maintenance costs by 30%. IBM PoC took a quarter of the time of competitors

Global investment bank selects IBM PureSystems to simplify WebSphere environment and develop new Messaging-as-a-Service solution



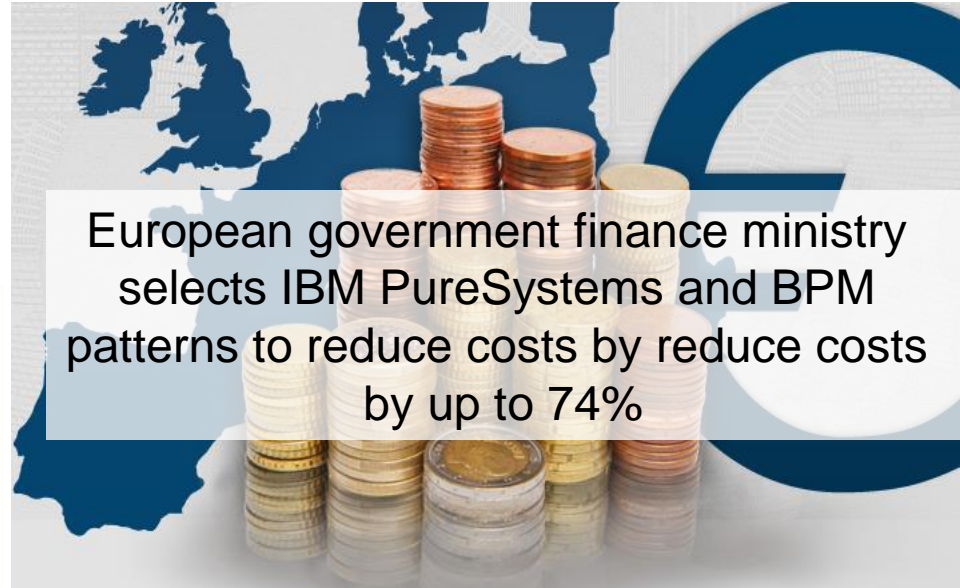
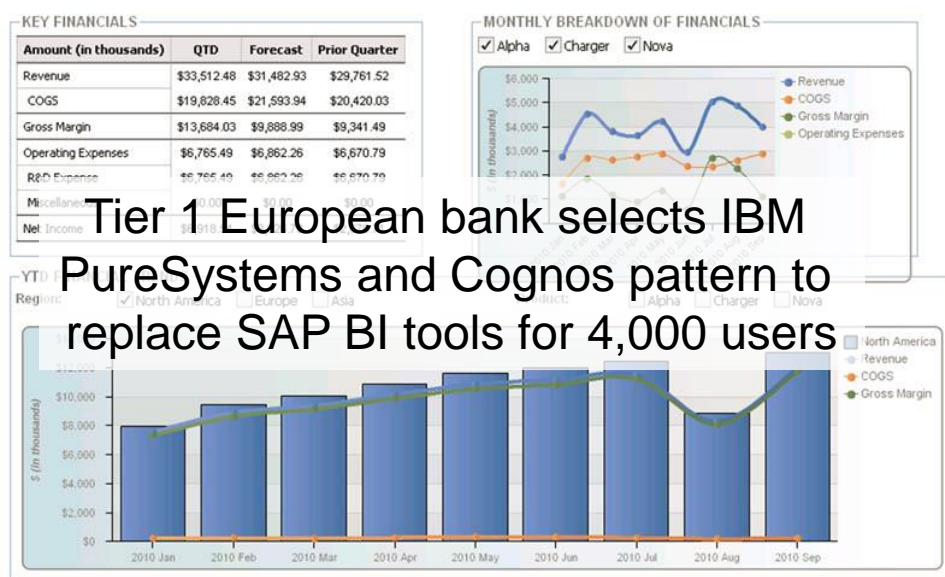
Pioneer selects hosted IBM PureSystems solution to facilitate collaborative development for its car navigation division



Asia Pacific government immigration department selects IBM PureSystems for Risk, Fraud and Integrity Division pattern analysis and risk profiling



# IBM PureSystems case studies



# IBM PureFlex System: the ideal cloud infrastructure system

## Expert Integrated System

- Integration by design
  - Compute, storage, networking, management
  - Advanced **Flex System** technology
- Built-in expertise
  - Infrastructure patterns
- Simplified experience
  - Rapid deployment
  - Single point of management



## PureFlex



## Cloud Infrastructure (IaaS)

- Supports a large number of applications, operating systems and hypervisors
- Self-service to multi-tenant compute, storage, and networking resource pools
- Virtual machine and storage mobility and management
- Image catalog and lifecycle management
- Self-service resource provisioning
- Advanced, platform based security

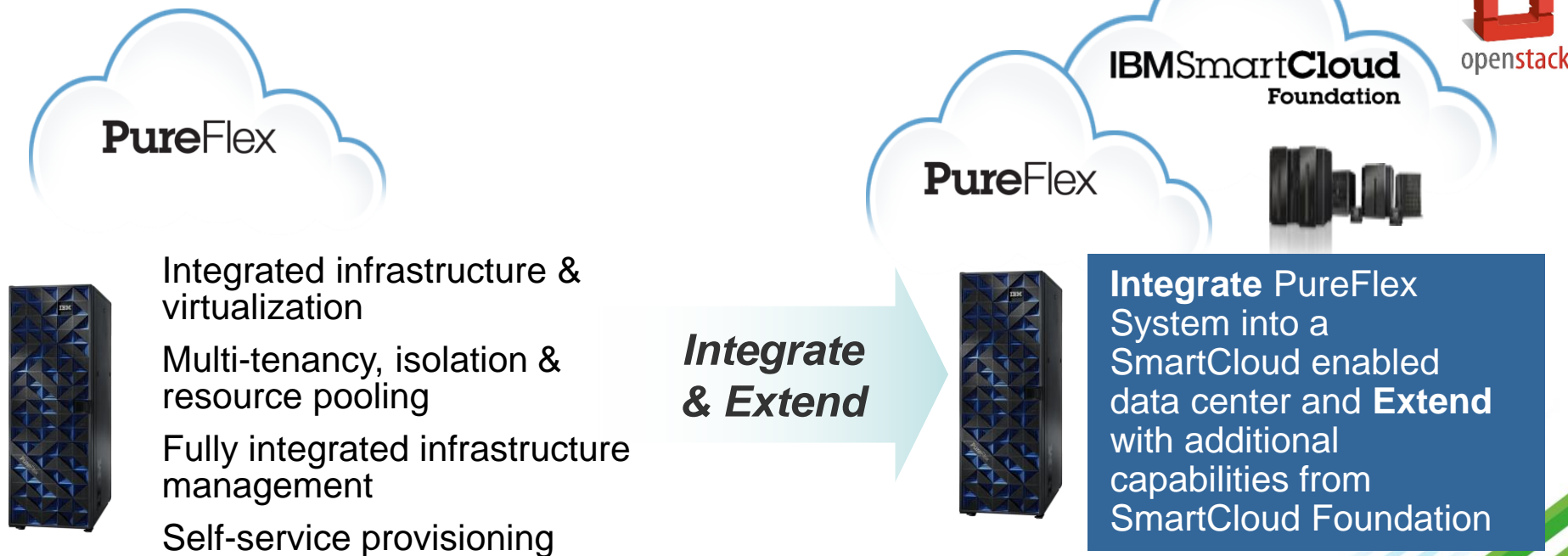
A recent IBM study has shown that in a fully populated rack configuration, IBM PureFlex is almost **one third** of the cost/core than a competing “block” architecture

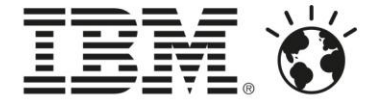


Start with IBM PureFlex System for IaaS & extend with capabilities from the IBM SmartCloud Foundation

## IBM PureFlex System

## IBM PureFlex System + IBM SmartCloud Foundation





# Quick review of PureApplication System

## Expert Integrated Platform for Applications

- Compute, Storage, Networking
- Integrated application server & database middleware services
- Integrated management, monitoring & maintenance

## Built-in Expertise

- Infrastructure, platform & app patterns
- Fault tolerant design
- Automated elasticity

## Open and Flexible

- Runs any software certified on AIX or RHEL (i.e. Oracle DB, SAP, etc.)
- Right-size & grow with your business from 32 to 608 cores
- Upgrade capacity without downtime

## Power7+ Compute

- Enhanced performance, density & resiliency



**PureApplication**

**Application Platform**

*Delivering Platform Services*

The image shows a tall server rack with a blue and black diamond-patterned front panel. The text 'PureApplication' is written in large white letters at the top. Below the rack, the text 'Application Platform' is written in white, and 'Delivering Platform Services' is written in a smaller, italicized white font. The background is a dark blue gradient.

## Install, Config, Tune:

Up and running in **less than 4 hours**

## Deploy:

Deploy a 3-tier web application in under **15 minutes** and automatically scale in **minutes**

## Manage:

Concurrent management of **1000+ VM's** on a single system

## Optimize:

Up to **60% better price/performance** running typical web and DB applications (over a competitor's configuration)

Automatic throughput improvement of **up to 2.3X** for data intensive applications



# The leading cloud platform for enterprise applications

## *IBM PureApplication™ System v1.1*

Increased flexibility with the first pre-integrated **application platform** for **Windows and Linux**

Lower TCO through the **high performance** hypervisor in PowerVM-based system

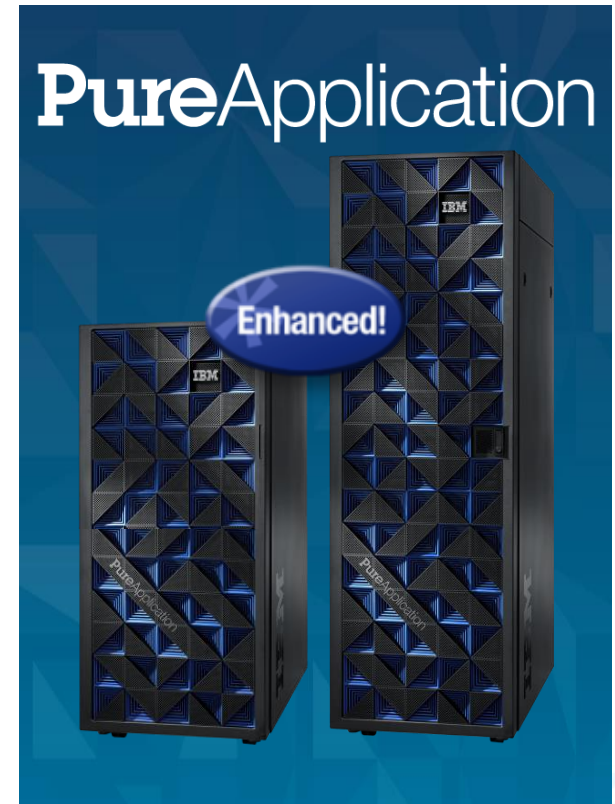
Ease of use with **cross-site disaster recovery** for applications setup **in 5 clicks**

Improved **application security** with integrated encryption support

**Faster response times** during usage spikes with new vertical scaling support

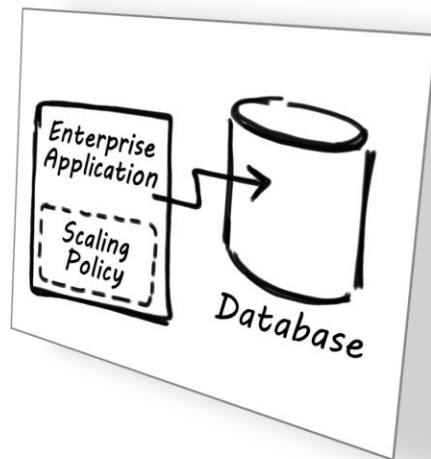
**Improved governance** through new license tracking and reporting and OS maintenance

Investment protection through **broad ecosystem** of **optimized application patterns**

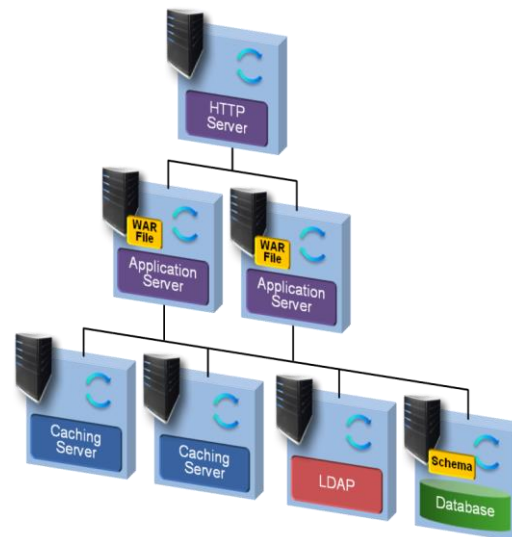


# Patterns of Expertise are a key capability for cloud application platforms – Web application example

What the business wants...



What's required...



What a pattern automates...



# Creating a Virtual Application Pattern



**IBM PureApplication System - Virtual Application Builder**

Sample Java EE Web application \*      Pattern Type: Web Application Pattern Type 2.0

Diagram   List View   Source   Save   Save As   Layout   Undo   Redo   Hints

**Assets**

Asset name

- Application Components
  - Additional archive file
  - Enterprise Application  
WebSphere Application Server
  - Existing Web Service Provider Endpoint
  - Policy set
  - Web Application  
WebSphere Application Server
- Database Components
  - Data Studio web console
  - Database  
DB2
  - Existing Database  
DB2
  - Existing Database  
Informix
  - Existing Database  
Oracle
  - Existing IMS Database
- Messaging Components
- OSGi Components

**Layers**

+ Add policy for application

```
graph LR; TradeWeb[TradeWeb Enterprise Application] --> TradeDB[TradeDB Database]; subgraph PolicyBox [ ]; direction TB; ScalingPolicy[Scaling Policy]; end;
```

**Scaling Policy**  
Web/Enterprise Application

**Maximum transaction timeout (seconds):**

**Interim fixes URL:**  
Click select button to update

Select

**Ignore inapplicable ifix updates:**

**Maximum Session Count:**

**Enable session caching:**

**Maximum Session Cache Grid Size:**  
UNCAPPED

**Scaling Type**

Response Time Based

**Scaling in and out when Web response time is out of threshold range(ms):**

0 10000

Range: 1000 - 2036

\* Instance number range of scaling in/out:

1 50

Range: 2 - 10

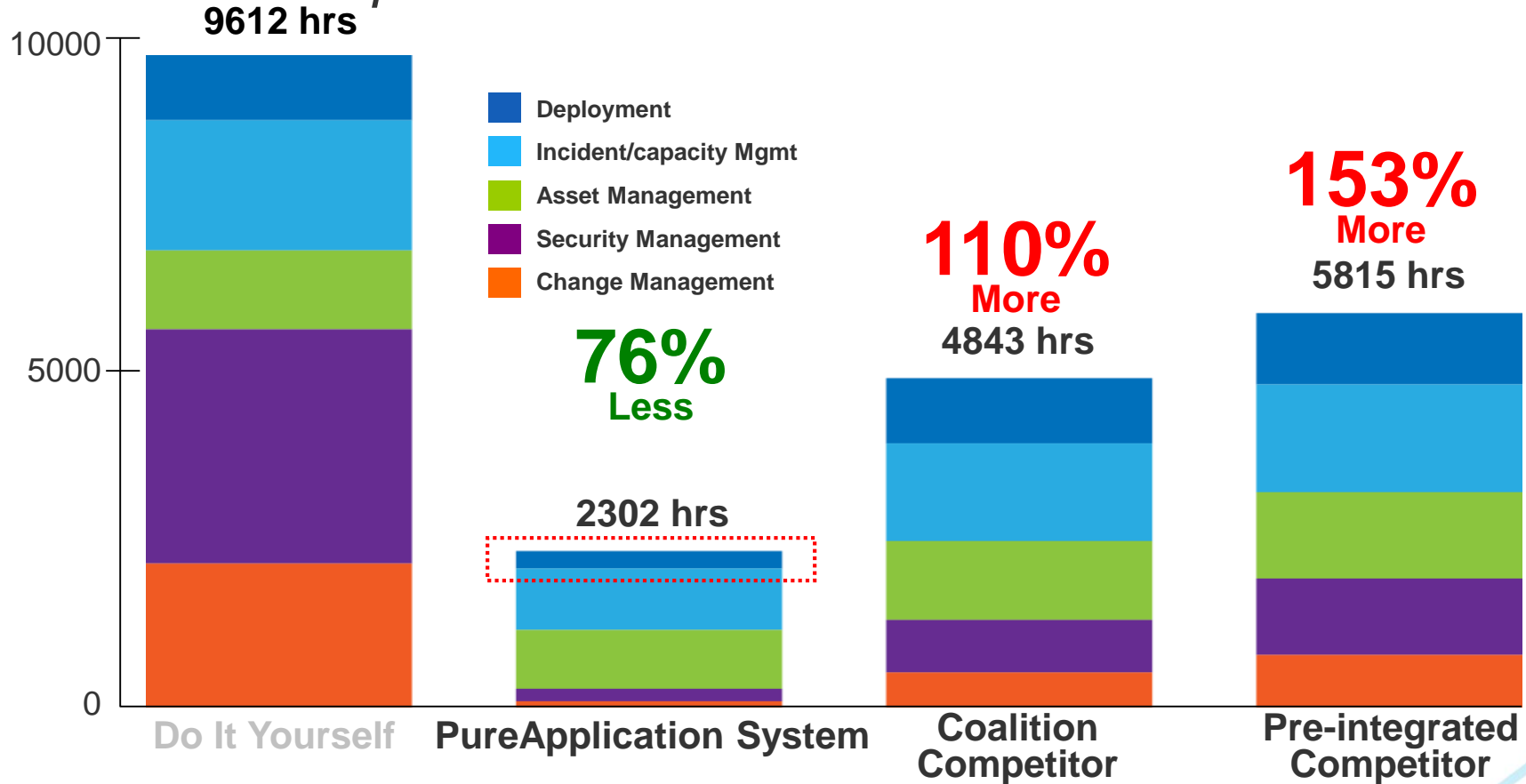
\* Minimum time (seconds) to trigger add or remove:

300



# PureApplication System patterns of expertise add unique value

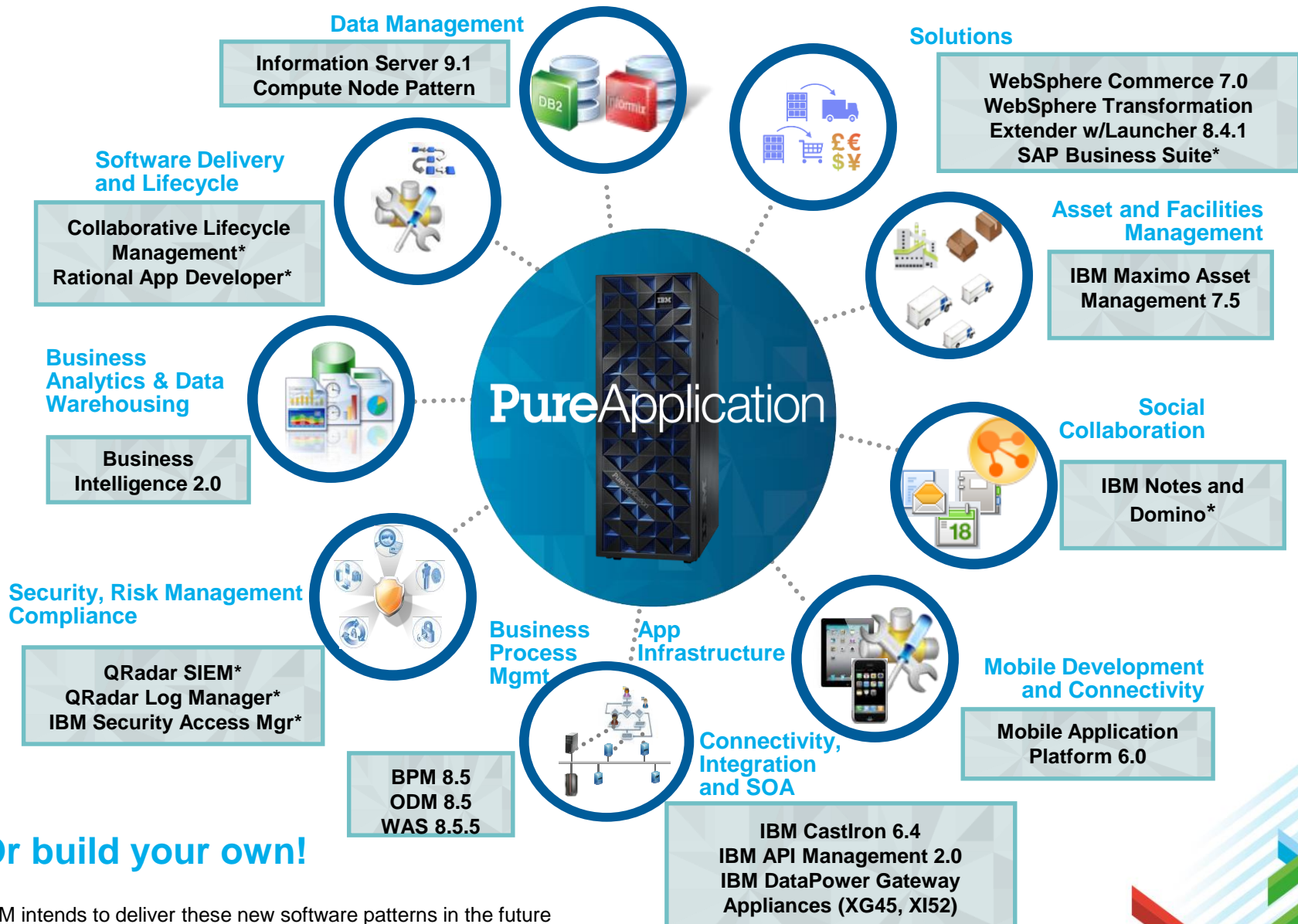
## Labor Hours Spent\*



\*Note: Coalition competitor used 9 competitor blades (144 cores). Pre-Integrated competitor used 18 pre-integrated nodes (288 cores). IBM PureApplication System used 3 nodes (96 cores). Each system has the capacity to run 72 workloads where each workload can sustain a peak throughput of 1720 page elements per second.

This is an IBM internal estimated labor study based on modeling customer data on IBM hardware and software solutions and on competitor converged solutions designed to replicate typical IBM customer usage in the marketplace. It is not a benchmark. As such, customer applications, differences in stack deployed and other systems variations may produce different results and may vary based on actual configuration, applications, specific queries and other variables in a production environment based on published standard labor rates for IT staff.

# Latest IBM PureApplication System patterns

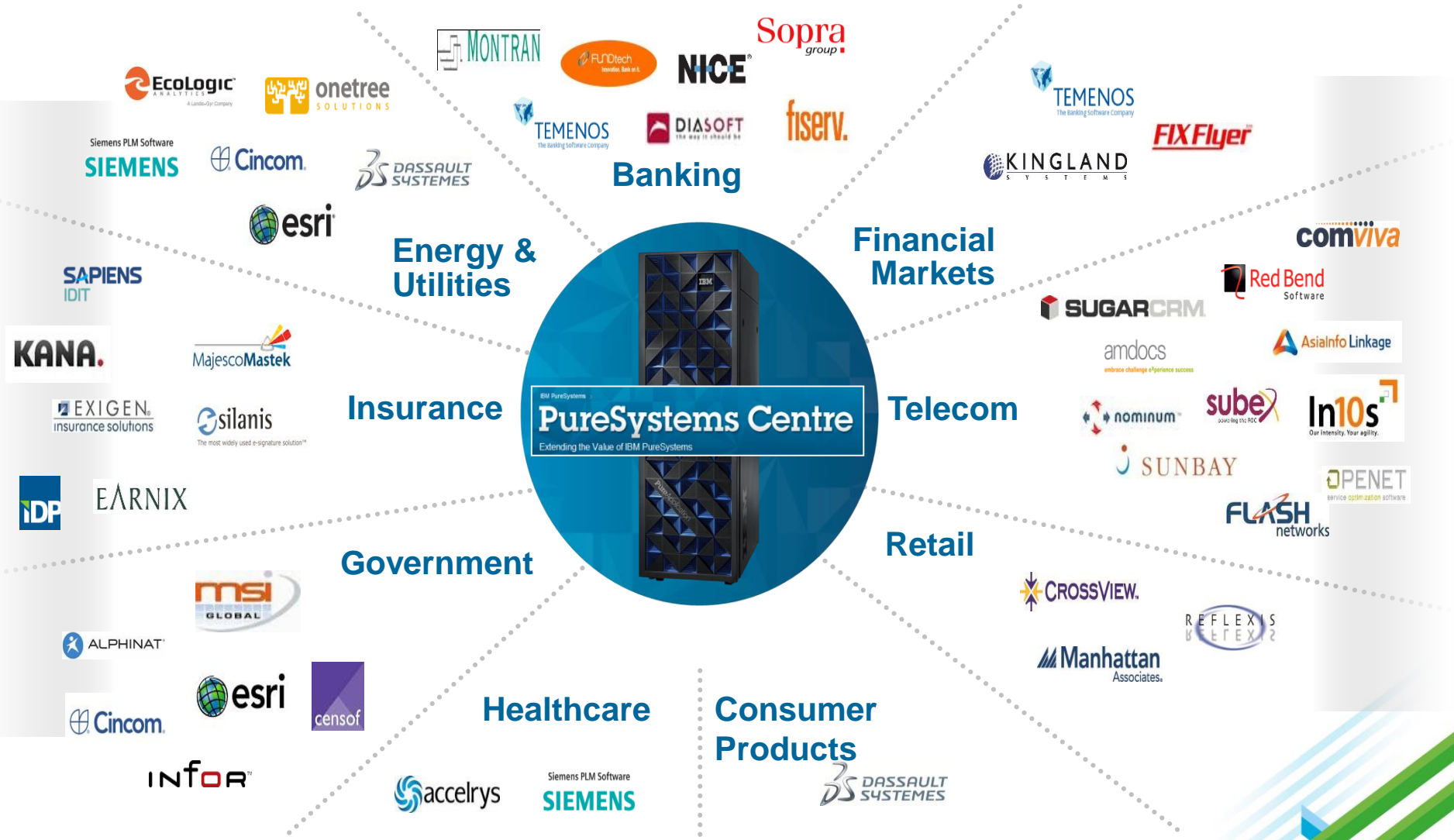


**Or build your own!**

\* IBM intends to deliver these new software patterns in the future

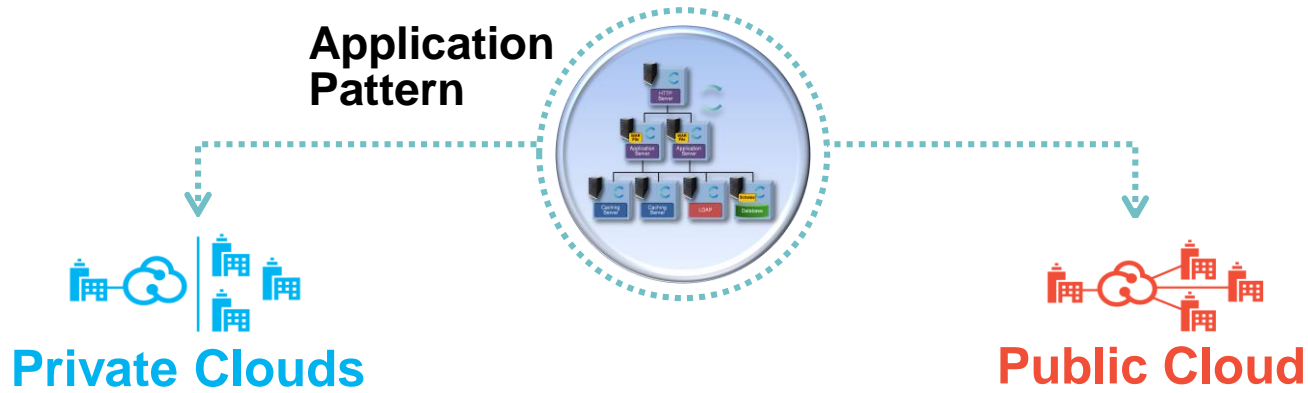


# Our rapidly-expanding “Patterns of Expertise” ecosystem





# IBM's pattern technology is common across cloud deployment options



Deploy patterns to your existing infrastructure with SmartCloud Foundation



PureApplication

**IBM SmartCloud Foundation**

Deploy patterns to PureApplication System



Deploy patterns to SmartCloud Application Services



**IBM SmartCloud Services**

# Take Action Now!

## Next steps:

Please come visit the **BusinessConnect Cloud Stand** today – where my colleague Rory O’Grady is giving live tours of IBM PureApplication System including our new Worklight-based Mobile App Pattern!

Ask your IBM sales representative to enroll your team on our next **Proof of Technology** events.

Follow our twitter stream **@IBMPureSystems** for the latest news and announcements.



The screenshot displays the IBM PureApplication System interface. On the left, a vertical list of 'Assets' includes categories like Application Components, Database Components, Messaging Components, OSGi Components, Transaction Processing Components, User Registry Components, and Worklight Components. On the right, a diagram titled 'Add policy for application' illustrates the architecture. It shows an 'OpenInsurance' Worklight Application connected to a 'Worklight Server' (Enterprise Application). The Worklight Server is linked to 'Worklight Configuration', 'Worklight Runtime DB' (DB2), and 'Worklight Reports DB' (DB2). A 'Routing Policy' is also shown connected to the Worklight Server. A photo of Rory O'Grady is visible in the top right corner of the interface.





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