IBM Integrated Expertise:
Unveiling a New Era of Computing

WELCOME

STEPHEN LEONARD, CHIEF EXECUTIVE, UK & IRELAND

AGENDA

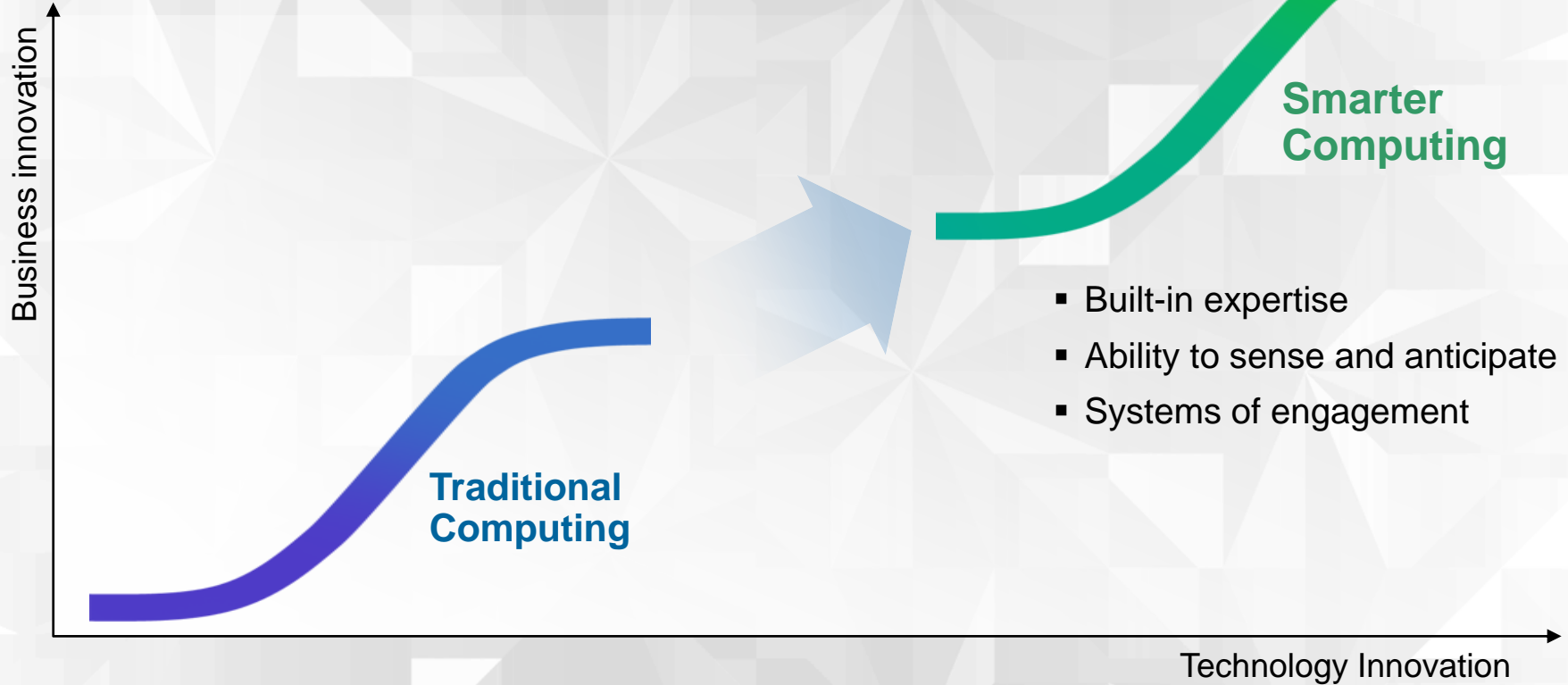| 11.00 – 11.20	A New Era of Computing	**Stephen Leonard**, Chief Executive, UK & Ireland
11.20 – 11.45	Introducing a New Family of Expert Integrated Systems	**Tom Rosamilia**, Vice President Corporate Strategy and General Manager Enterprise Initiatives
11.45 – 12.10	Integrated Expertise The Project Troy Difference	**Marie Wieck**, General Manager, Application & Integration Middleware
12.10 – 13.00	Experience Panel	Panel **John Schlesinger**, Chief Enterprise Architect,Temenos **Philippe Forestier**, Executive Vice President, Dassault Systèmes **Niall Norton**, Chief Executive Officer, Openet **Simon Withers**, Head of Product Development, SunGard **George Thaw** - Chief Operating Officer UKI, SAP
13.00 – 13.05	Close	**Stephen Leonard**, Chief Executive, UK & Ireland
13.05 – 14.00	Lunch & Area of Expertise	

A New Era of Computing

On a Smarter Planet, technology innovation redefines industries

Law Enforcement

Fraud Prevention

Traffic Control

Trading

As IT moves to the strategic center of business
The model must shift to Smarter Computing

Smarter Computing

- Built-in expertise
- Ability to sense and anticipate
- Systems of engagement

Traditional Computing

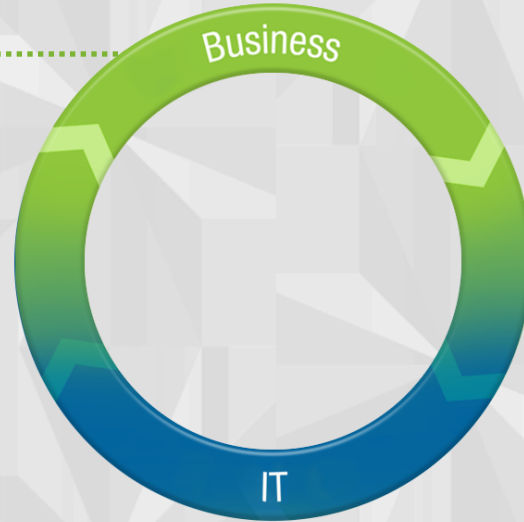Business innovation

Technology Innovation

IT must break through budget and resource barriers

Business Goals

Grow top and bottom line by:

- Driving business innovation
- Make new markets
- Respond to competitive threats
- Enhance the customer experience

Business

IT

IT Reality

Getting Up and Running

- 2-3 months to specify and procure
- 2-3 months to integrate, configure and deploy

Development Operations

- 3-6 months to go from development to production

Ongoing Effort

- 1-3 months to troubleshoot and tune
- Ongoing effort and downtime to maintain, scale and upgrade

Typical Results:

- 23% of new IT projects (worldwide) deploy late
- 55% experience application downtime for major infrastructure upgrades once deployed

Only 1 in 5 can allocate more than half their IT budget to innovation
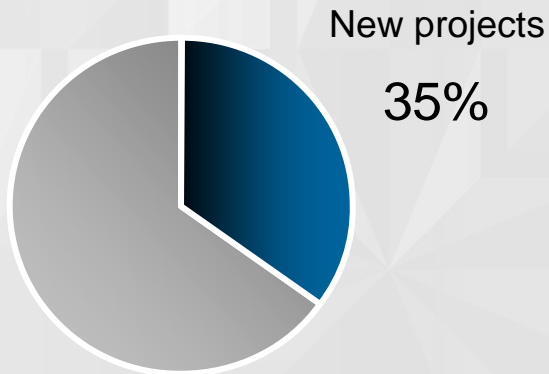
Least efficient data centres

Use of new technology:

43% first and fast technology adoption
1% move virtual machines to meet desired outcomes
21% use storage virtualization
3% use a storage service catalog (tiered storage)

Results:

**Maintaining
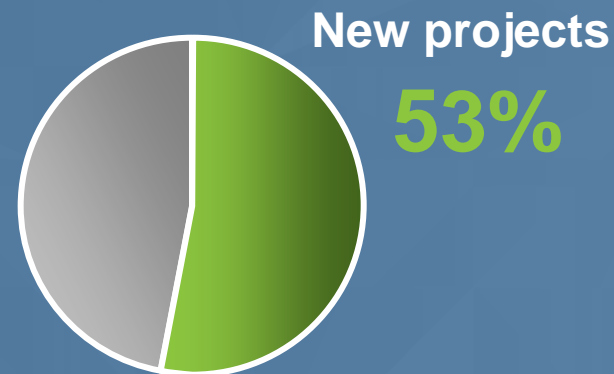existing
infrastructure**

65%

New projects

35%

Most efficient data centres

Use of new technology:

86% first and fast technology adoption
58% move virtual machines to meet desired outcomes
93% use storage virtualization
87% use a storage service catalog (tiered storage)

Results

Maintaining
existing
infrastructure

47%

New projects

53%

Clients have tried various approaches to close the gap

| Client-tuned Systems	Appliances	Cloud
Benefits		
Flexibility Control	Simplicity Rapid Deployment	Agility Elasticity
Challenges		
Time and Expense Required	Single Purpose	Shared Dependence

What if you could have the best of all three?

The time has come for a new breed of systems
Systems with integrated expertise and built for cloud

Built-in Expertise
Capturing and automating what experts do – from infrastructure patterns to application patterns
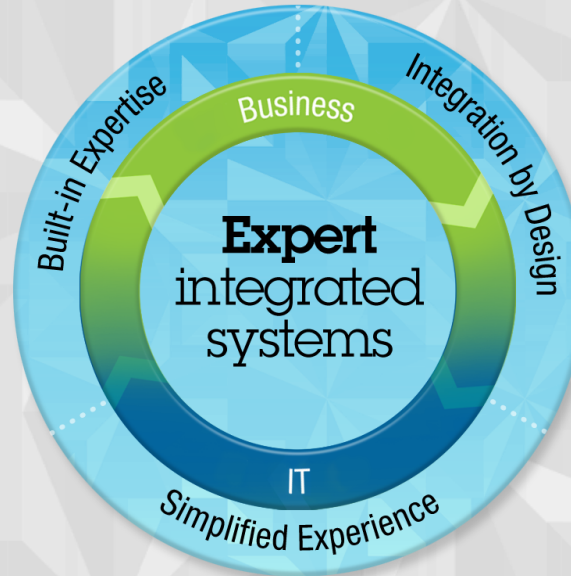
Integration by Design
Deeply integrating and tuning hardware and software – in a ready-to-go workload optimized system

Simplified Experience
Making every part of the IT lifecycle easier - with integrated management of the entire system and a broad open ecosystem of optimized solutions

PureSystems

The world's first family of expert integrated systems

Announcing the first two members of the IBM PureSystems family

PureFlex

Infrastructure System:
Expert at sensing and anticipating resource needs to optimize your infrastructure

PureApplication

Platform System:
Expert at optimally deploying and running applications for rapid time-to-value

Built-in expertise ▪ Integration by design ▪ Simplified experience

Tom Rosamilia
 Vice President, Corporate Strategy and General Manager, Enterprise Initiatives

Introducing a New Family of Expert Integrated Systems

# Announcing the first two members of the IBM PureSystems family

PureFlex

Infrastructure System:
*Expert at sensing and
anticipating resource
needs to optimize
your infrastructure*

PureApplication

*Platform System:
Expert at optimally
deploying and running
applications for rapid
time-to-value*

Built-in expertise ▪ Integration by design ▪ Simplified experience

PureSystems
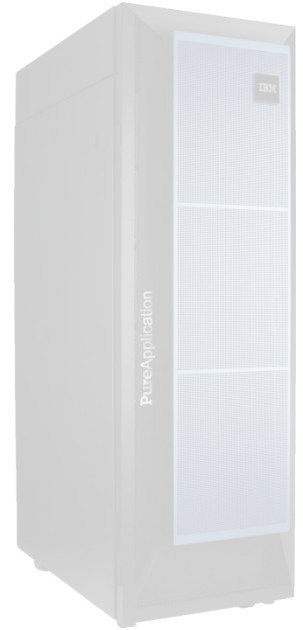
Built-in Expertise

Infrastructure patterns and self-optimizing technology for lower cost,
based on the experience of managing tens of thousands of data centers

Up to:

Smart data placement

300% increased performance of critical applications

Thousands of virtual machines on single system
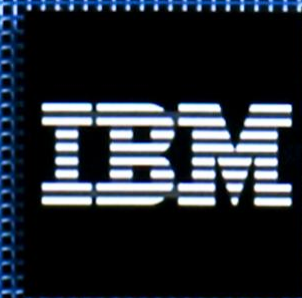
2X improvement in system utilization
70% fewer cores for reduced software licensing

Management integration

50% lower management costs
2X improvement in fault diagnosis

Over $2B in R&D and acquisitions over 3 years
Millions of development hours across 37 labs in 17 countries

Estimated Results. Results will vary depending on customer environment.

IBM

Integration by Design

A complete system that is cloud-ready, more secure
and designed from the start to work together

Up to:

Intelligent cloud technology	**2X** application density in same floor space **50%** improvement in administrator productivity
Security innovation	**0** setup time to achieve enterprise risk reduction with trusted protection built in from the hardware up
Scale-in systems networking	**50%** latency improvement for faster application performance

IBM-designed management across compute,
storage, and networking – in a single system
with upgradability to future technologies

Estimated Results. Results will vary depending on customer environment.

Simplified Experience

Management integration and choice at every step,
to make IT easier

PureFlex

Up to:

Factory pre-configured and tested

70% faster setup time

Dynamic resource allocation

Days to **minutes**
for workload deployment time

Management across physical & virtual resources

75% lower systems costs over 3 years
98% time savings in storage provisioning

Management from a single pane of glass
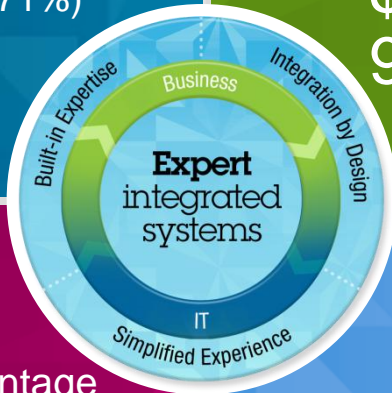*with open choice of environments and applications*

What can this mean for clients? Reduced cost. Greater value.

Managed services provider can consolidate mixed environment

$2.6M systems and OPEX savings (71%)
$2.0M management savings (53%)

Manufacturer can optimize existing ERP environment

$3.8M software licensing savings (78%)
9 months payback

Bank can innovate in response to market conditions for competitive advantage

1 day or less to deploy new service and realize revenue faster (vs. weeks)

Retailer can accelerate private cloud for regional store operations

~$1M management cost savings (56%)
$2.8M lower total IT costs (54%)

Built-in Expertise
Business
Integration by Design
Expert integrated systems
IT
Simplified Experience

Estimated Results. Results will vary depending on customer environment.

PureSystems

IBM

Runs tens of thousands of applications, with over 100 optimized for PureSystems

IBM PureFlex System
*Infrastructure **Flex**-ability to meet a variety of client needs*

Built-in Expertise

Integrated by Design

Simplified Experience

A continuum of expert integrated systems that delivers value from the moment of acquisition

Express
Infrastructure for small and midsize businesses

Standard
Infrastructure for cloud deployments
and server consolidation

Enterprise
Infrastructure for large-scale deployments;
highly redundant for resilient operations

Marie Wieck
General Manager, Application & Integration Middleware

Integrated Expertise
The IBM PureSystems Difference

Announcing the first two members of the IBM PureSystems family

PureFlex

Infrastructure System:
Expert at sensing and
anticipating resource
needs to optimize
your infrastructure

PureApplication

Platform System:
Expert at optimally
deploying and running
applications for rapid
time-to-value

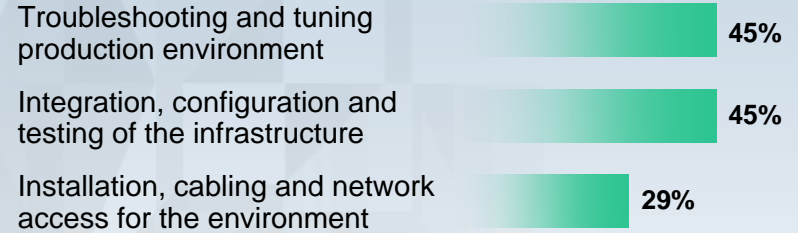Built-in expertise ▪ Integration by design ▪ Simplified experience

Clients struggle to overcome barriers of time, cost and risk
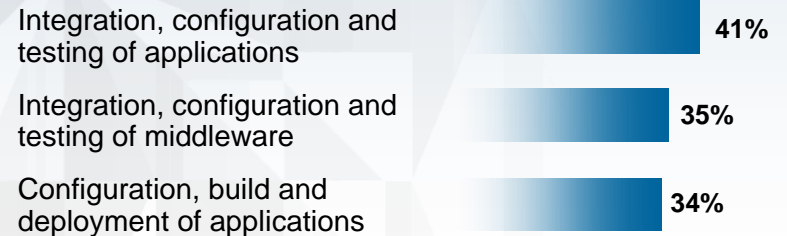
Typical IT Project Time and Budget

Phase	Time (days)	Budget
Specify/design	73 - 96	14% - 16%
Procure	57 - 112	19% - 21%
Implement	74 – 93	12%
Configure/test	74 – 80	10% - 11%
Cluster & HA	66 – 104	11% - 12%
Backup	44 – 108	10%
Tune	89 – 98	9% - 10%
Management	67 – 110	9 – 10%

34%** of new IT projects (US) **deploy late

Top Causes of Project Delays

Hardware

Troubleshooting and tuning production environment — **45%**

Integration, configuration and testing of the infrastructure — **45%**

Installation, cabling and network access for the environment — **29%**

Software

Integration, configuration and testing of applications — **41%**

Integration, configuration and testing of middleware — **35%**

Configuration, build and deployment of applications — **34%**

Source: A commissioned study conducted by Forrester Consulting on behalf of IBM

IBM PureApplication System

Optimizes the complete solution stack:

- All hardware and software components factory integrated and optimized
- Single point of unified lifecycle management
- Integrated monitoring & maintenance
- Integrated and elastic application and data runtimes
- Application patterns allocate system resources for optimal performance, security and reliability

IBM PureApplication System: the expert integrated platform system

PureApplication

Built-in Expertise

Patterns of expertise built from decades of experience extend business value

Integration by Design

Resource and workload optimized with complete platform-as-a-service cloud capabilities built-in

Simplified Experience

An open, integrated system enabling business model and ecosystem flexibility with a single pane of glass to manage both the infrastructure and application platform

Built-in Expertise

Capturing and automating what experts do –
from the infrastructure pattern to the application pattern

tuned for the task	Pre-optimized for enterprise application workloads
smart	Workload patterns codify IBM, Partner, and client expertise
mission critical	Resilient, secure, virtualized, and scalable infrastructure

Clients have experienced:

Captures up to 80%
of today's workloads

Reduced time to provision from
45 days to minutes

Source: externally published customer case study data for existing capabilities that are include in PureApplication System
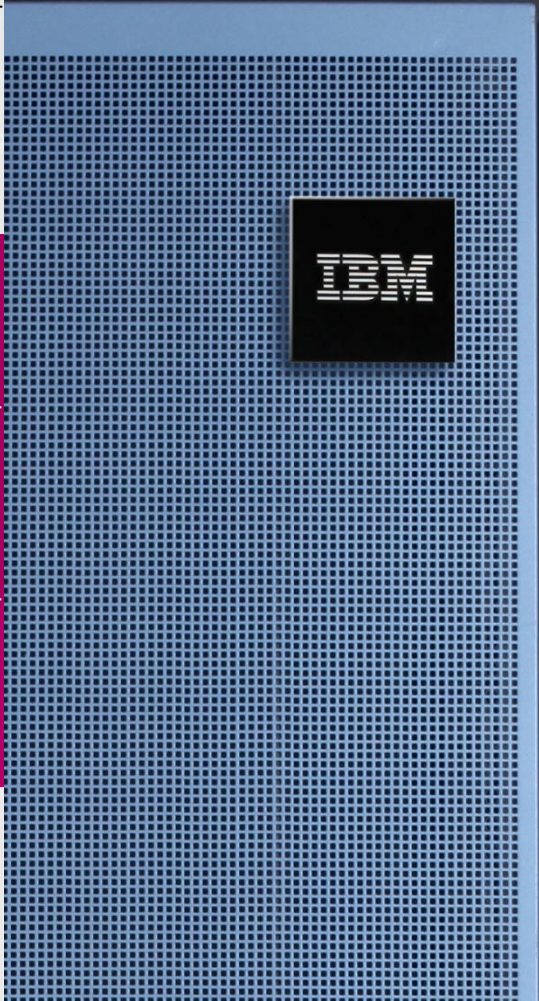
Integration by Design

Deeply integrating and tuning hardware and software –
in a built for cloud, ready-to-go workload optimized system

lower risk	Repeatable, self service provisioning
scalable	Integrated and elastic application and data runtimes
workload optimized	Application-aware workload management

Clients have experienced:

20-30 times faster
new application deployment

55% reduction
required management time

PureApplication

PureSystems

Simplified Experience

Making every part of the IT lifecycle easier – with integrated management and a broad, open solution ecosystem

open	**Easy to integrate and deploy including JAVA, PHP, Ruby …**
management innovation	**Single point of platform management**
lifecycle approach	**Integrated monitoring & maintenance**

Up to:

53% Reduction
change management

incident/capacity management
reduction by 57%

PureApplication

Design matters: inheriting infrastructure **FLEX**-ibility

Application patterns from IBM and partners

Integrates an application platform optimized for enterprise applications

Inherits the capabilities of PureFlex System

**Patterns of Expertise:** A deployable form of proven best practices and expertise to simplify complex tasks.

Application Platform

- Application Optimization
- System wide Management
- Automation & Scaling
- Caching & Elasticity
- Application Centric Provisioning
- Usage Metering

- Security
- Monitoring
- IT Lifecycle Management
- License Management
- Self-service
- Data management

System Infrastructure

- Integrated Server, Storage, Network
- Power Management
- Storage & VM Optimization
- Virtualization
- Integrated System Management

- Provisioning
- Security
- Monitoring
- IT Lifecycle Management
- System design
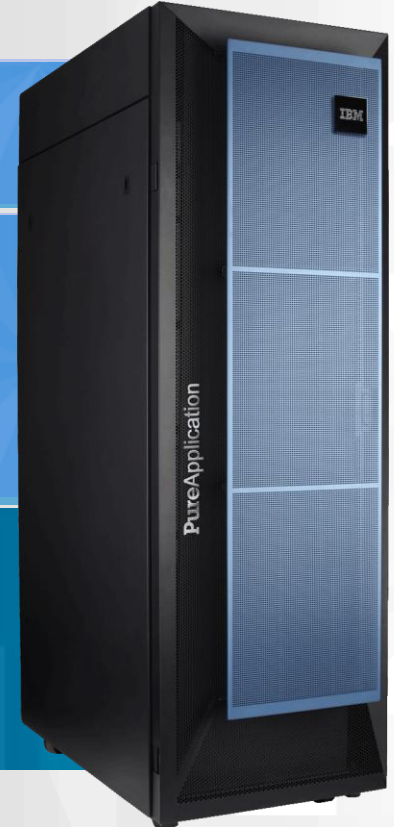
Patterns accelerate business value

What the business wants…

Application

Database

What's required…

HTTP Server

WAR File — Application Server

WAR File — Application Server

Caching Server

Caching Server

LDAP

Schema — Database

Monitoring Lifecycle Management
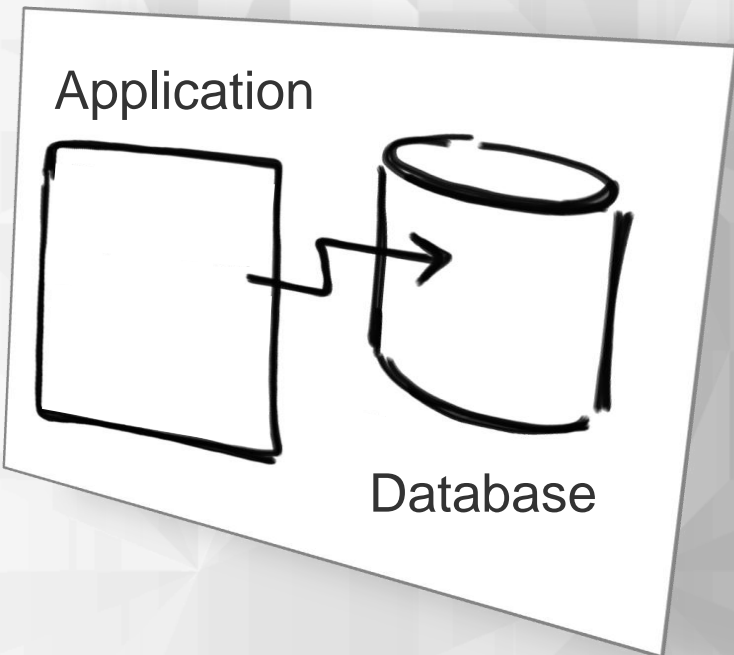
Built-in web application pattern delivers proven expertise

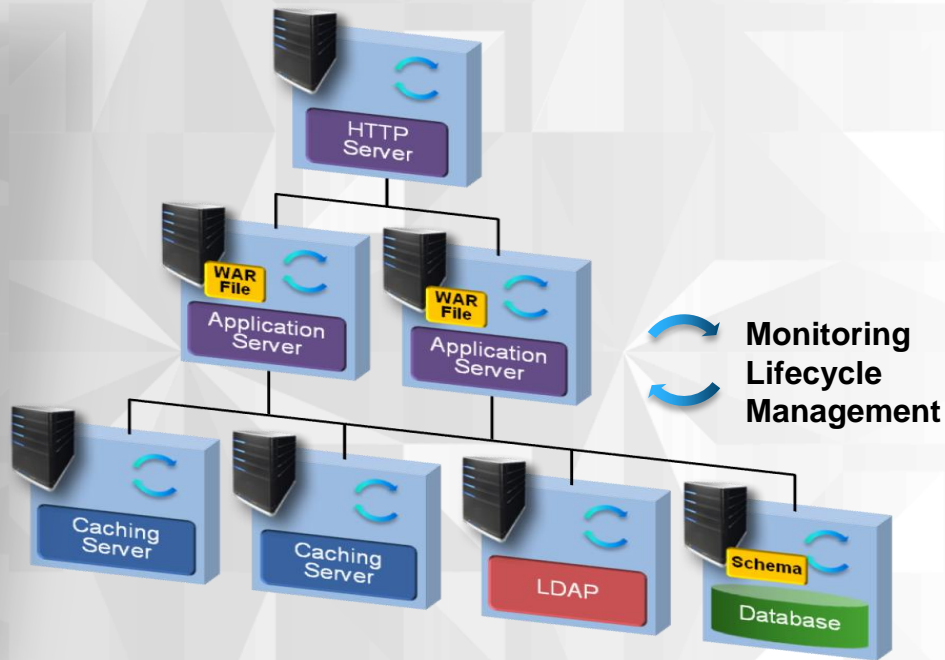|	
Auto Scaling	Managed environments scale up and down based upon business SLAs you specify
Failover	Failed virtual machines are replaced with new VMs which are configured with the old VM's identity
Load Balancing	Web requests are automatically load balanced across multiple virtual application servers
Security	ACL's for application sharing and management access; LDAP integration for application security
Monitoring	All components of virtual application environments are monitored by PureApplication System
Lifecycle Management	Built-in components are pre-configured, tuned, and tested to enable efficient, minimal click deployment

HTTP Server

Monitoring
Lifecycle
Management

WAR File — Application Server
WAR File — Application Server

Caching Server
Caching Server
LDAP
Schema Database
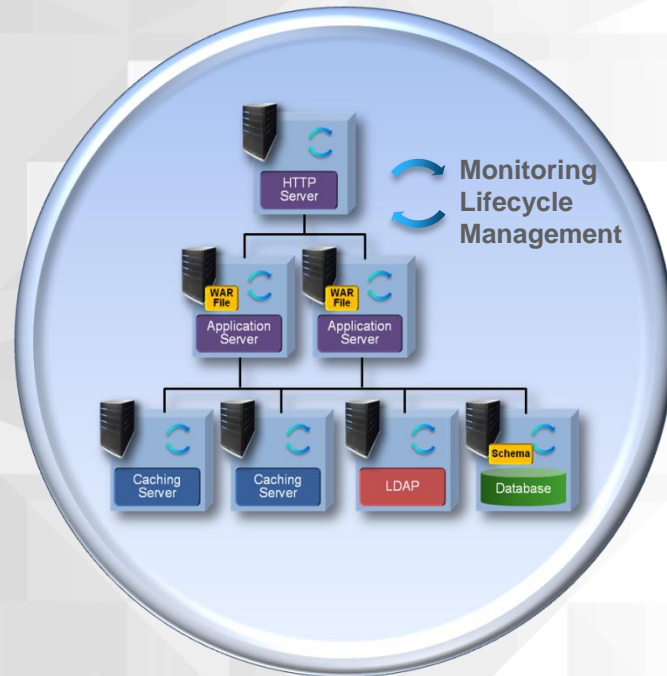
Three ways to get the value of patterns of expertise

Add **third-party** application patterns of expertise

Use **IBM** patterns of expertise throughout the system

Capture **your own** expertise:

- Image Construction & Composition Tool allows you to create your own custom virtual images

- Pattern Development Kit allows you to create your own virtual application patterns.

- Capture existing expertise for operating system and middleware installation

- Dynamically combine pre-defined components to build new image packages

- Create a standard VM format in Open Virtual Format

Capture 80% of today's workloads

IBM and partner "patterns of expertise" extend the system value

Application Patterns
Available patterns from IBM and Partners

100+ ISV business applications
Business intelligence
Business process management
Web experience (portal)

Available through PureSystems Centre

Platform Patterns
Expertise across the middleware and infrastructure

Web application deployment
Database deployment
Cloud platform management

Built-in with flexibility

Infrastructure Patterns
Expertise across the compute resources

Scalability   **Provisioning**
Upgradability   **Storage optimization**

PureSystems

Extensibility from the broadest ecosystem is made easy

New IBM PureSystems Centre:

- Gain access to a broad community of IBM and certified partner expertise

- Download optimized, deployable application patterns from 100+ leading ISV partners

- Search by solution area, industry or system

- Download fixes and patches

- Access to developer community

Also run your existing applications today*

IBM PureApplication System is built for cloud

Characteristics of a Cloud:

Dynamic resource scalability

Highly standardized infrastructure

Multi-tenancy

Virtualization

Automated provisioning of IT resources

Catalog of services

User-based self-service

Service level management

Usage-based reporting

=

PureApplication

Platform as a Service

IBM PureApplication System delivers value throughout the IT lifecycle
Driving efficiencies across these areas:

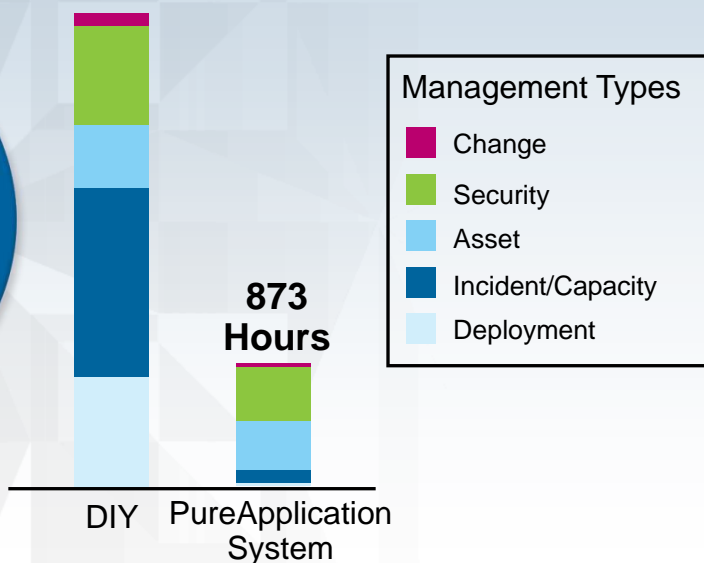## 47% fewer deployment labor hours

Virtually eliminating these steps:

- ☐ Specify/design required servers
- ☐ Integration/configuration/testing of infrastructure software and middleware
- ☐ Application deployment
- ☐ Clustering and backup implementation
- ☐ Trouble shooting/tuning production environment
- ☐ Implementing hardware management environment

73% fewer management labor hours

Yearly labor hours to manage a private cloud environment

3370 Hours

873 Hours

IT Lifecycle

DIY

PureApplication System

Management Types

- ■ Change
- ■ Security
- ■ Asset
- ■ Incident/Capacity
- ■ Deployment

PureApplication System Life Cycle Labor Savings Case Study

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PureExperience: IBM's investment to *prove it*

IBM PureExperience Offers the following at no charge:

1. On-site installation of PureApplication System and guided demonstration of business value

2. Free execution of a 10 day *PureStart* on-site service engagement

3. Continued use of the PureApplication System for 30 days, inclusive of *PureStart*

4. Access to a lab advocate for usage questions and advice

5. Single point of IBM support and maintenance

IBM PureApplication System
Consolidate and optimize to drive innovation and accelerate cloud adoption

Built-in Expertise

Integrated by Design

Simplified Experience

- **Consolidate** your application infrastructure to help reduce operating costs

- **Optimize** existing applications for improved performance and stability

- **Innovate** to help you be more competitive and responsive to changing business requirements

- **Accelerate cloud** adoption to help quickly deploy new services and solutions

Experience Panel

Closing – Next Steps

100 years of experience delivering essential IT

- 19 years as top U.S. patent recipient

- Since the beginning of 2000, we've spent nearly $70 billion in research and development

- 250k technical experts worldwide

- Market leading systems and software

- Global financing with flexible payment options

- Commitment to open standards

- Broad open ecosystem of 120k partners

Take the next step…

Prove the value and begin your journey with IBM PureSystems:

- Visit www.ibm.com/**puresystems** to learn more

- Invite an IBM subject matter expert to explore with your team the value IBM PureSystems could bring to your business

- Tell us what you think – join the conversation on twitter **@IBMPureSystems** & on **expertintegratedsystemsblog.com**

PureFlex

PureApplication

IBM Integrated Expertise:
Unveiling a New Era of Computing