

BusinessConnect

A New Era of Smart

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Dynamic Hybrid Clouds Deliver Responsive IT

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Market Dynamics are Creating Unprecedented Expectations on IT Leaders

Cloud
Demand for speed require fast, scalable environments for dev and test, as well as production

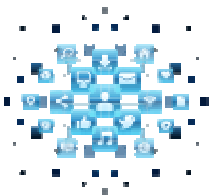


Mobile
Modern workforce expects constantly updated software to connect to enterprise systems



Big Data
Insights on new products by more efficiently interpreting massive quantities of data

Empowered Practitioners
Broader set of stakeholders collaborates to deliver continuous innovation



IT Leaders



\$921Bn
Enterprise will spend on public cloud services between 2013-17

25%
of applications will be in the cloud by 2016

36%
Of Cloud services are managed by LOB teams today

1.3TB
of operational data a day

12%
Estimated % of data analyzed by enterprises



Where speed is the new currency ...

58%

place faster delivery of IT services in their top 3 priorities

83%

of IT leaders don't believe they can deliver services fast enough



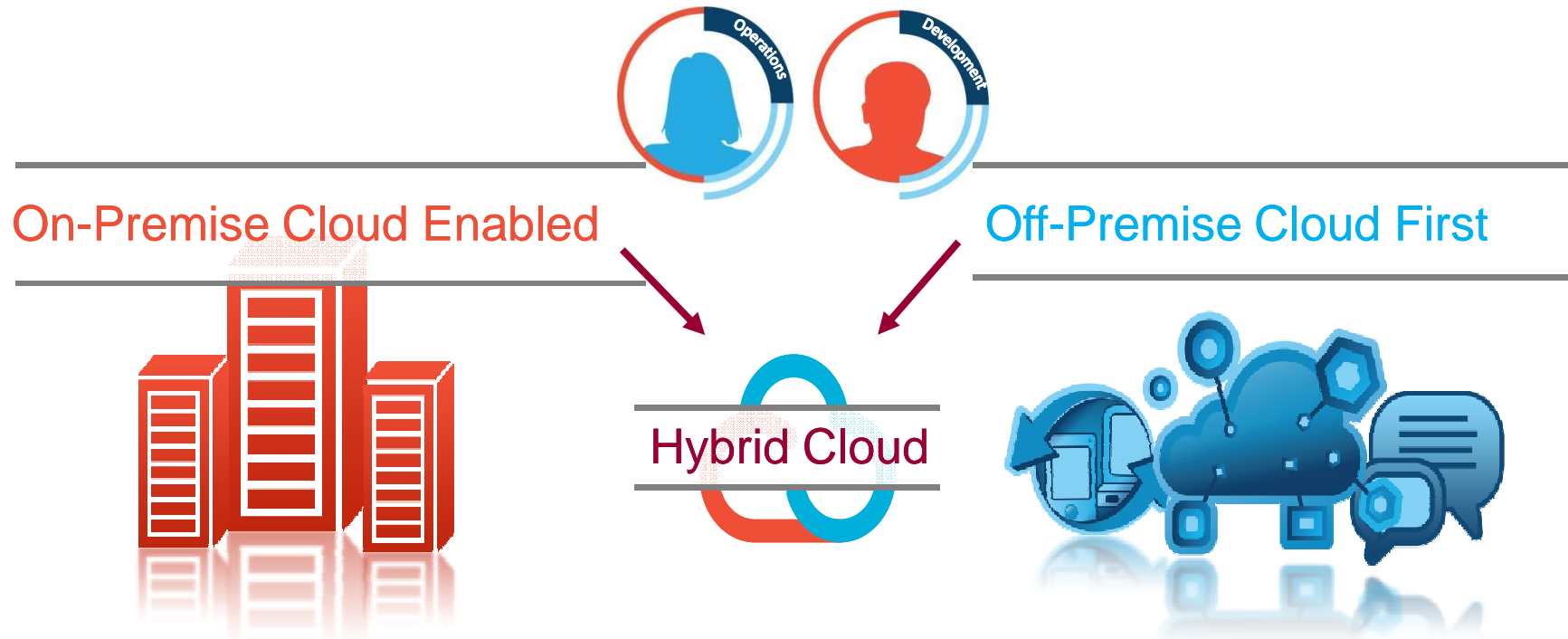
Prioritizing IT needs

Delivery improvement

Survey of Fortune 1000 IT leaders...



Client are increasingly leveraging Public and Private Clouds today but quickly realizing that only a 'Hybrid' solution would address the complete spectrum of their needs



- Capacity and Peak
- Flexibility and Multi-Sourcing
- Compliance and Regulations

- Transaction ready engagement
- Multi-App Integration
- Differentiated Service

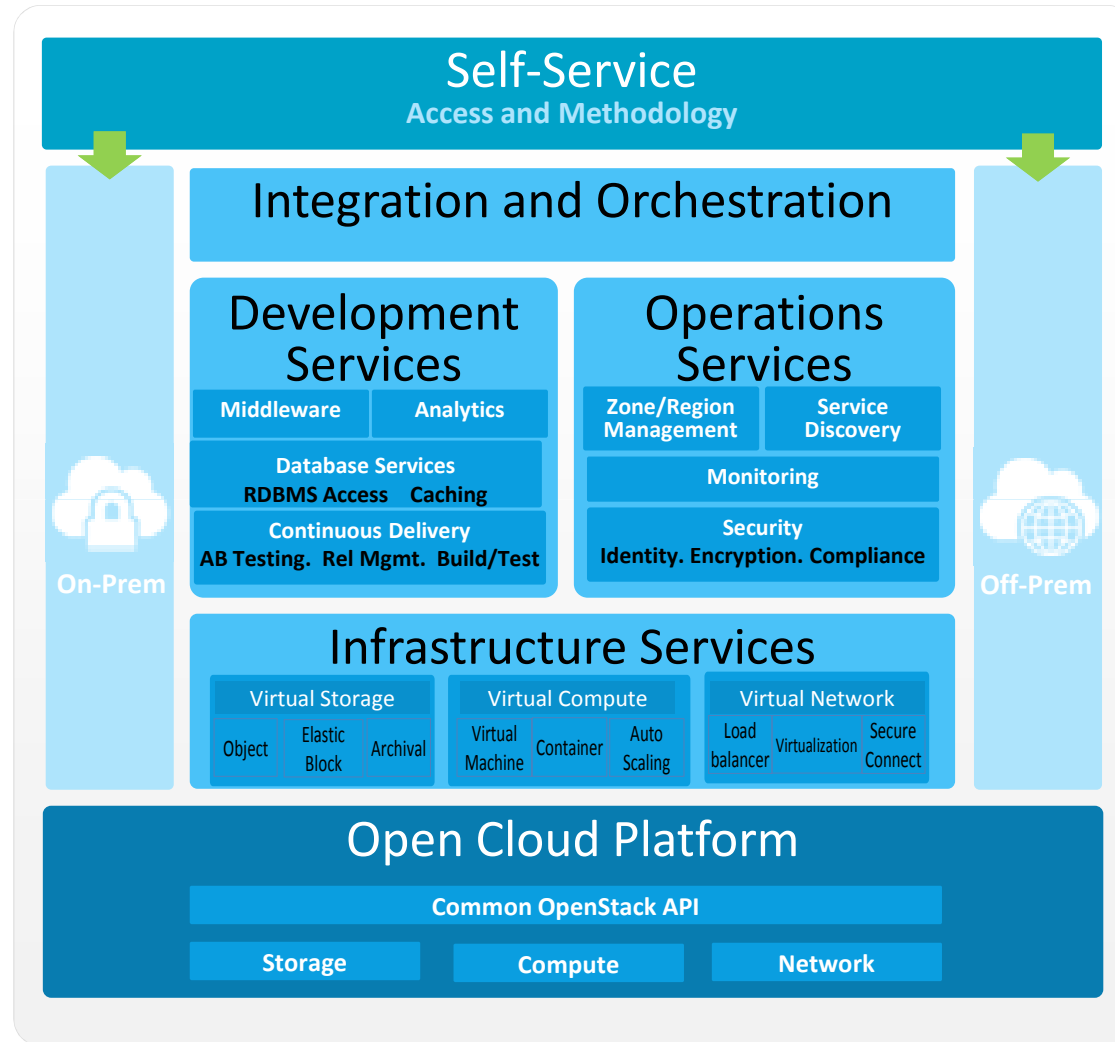


'Hybrid Cloud' Use cases are starting to take shape

Social & Mobile Integration	Independent Workloads	Brokerage	Disaster Recovery	Reserve for Peak	Portable Workloads
<p>Systems of Record on Private and Systems of Engagement on Public</p>	<p>Production workloads on Private and Test/Development on Public</p>	<p>Multi-Sourced IT environment with policy based deployment</p>	<p>Use Private at normal times. Switch to DR environment on Public</p>	<p>App dynamically uses Public in case of resource shortage on Private</p>	<p>Application and data are portable and can go to and from clouds</p>



What are the core capabilities needed to address these use cases ?



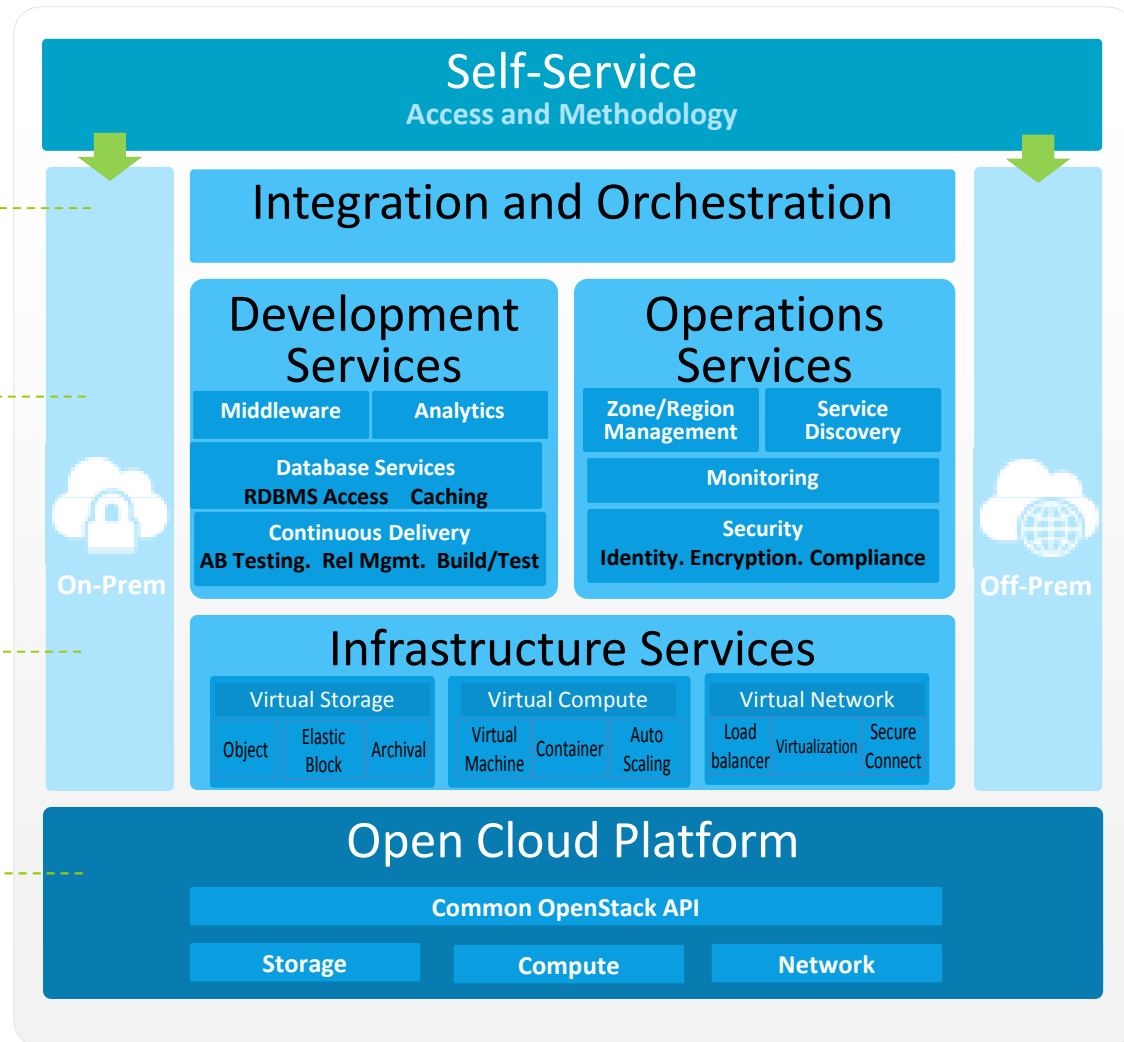
What are the core capabilities needed to address these use cases ?

Ability to define, integrate and orchestrate Workloads/Services

Develop and Manage across heterogeneous environments

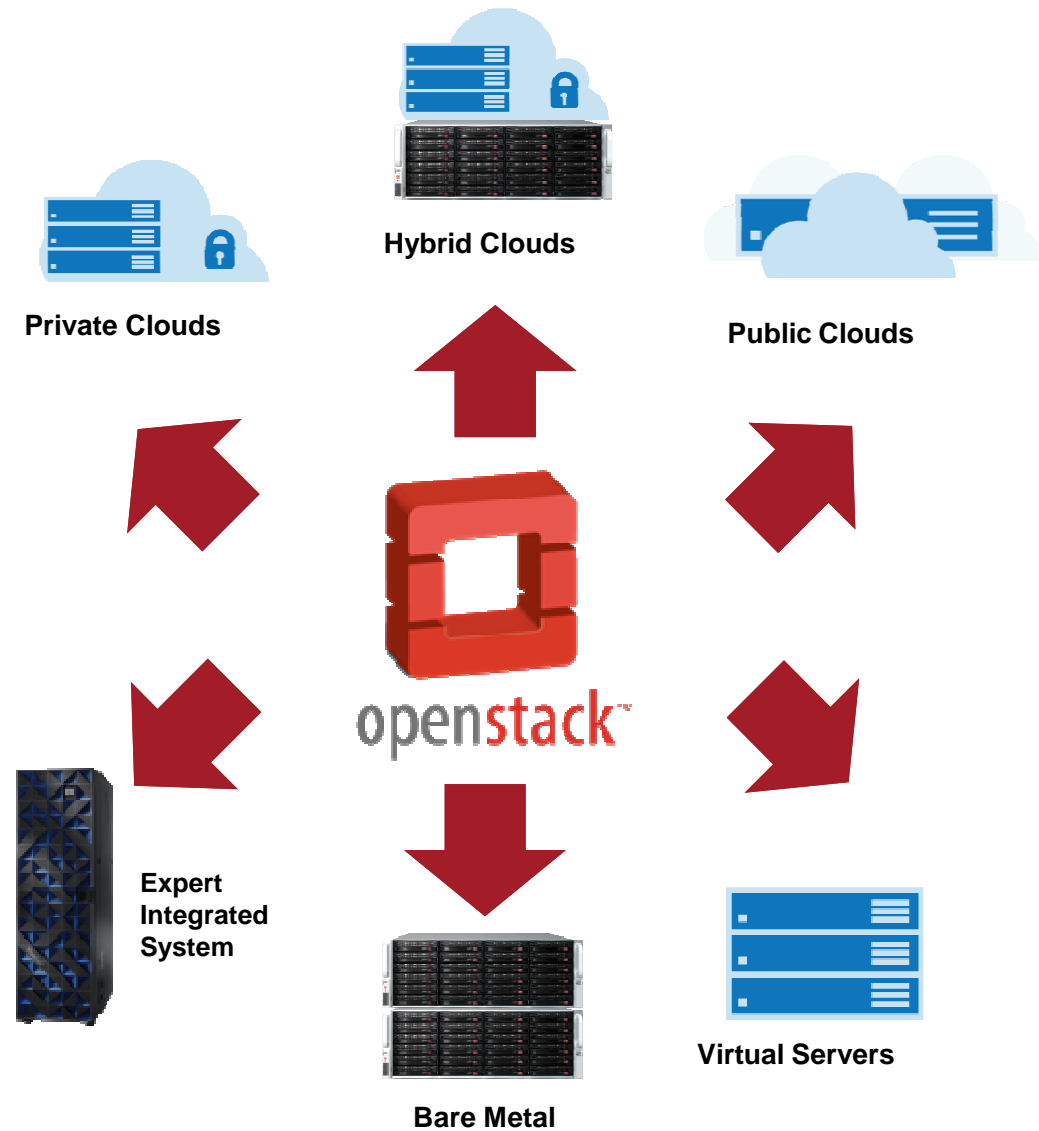
Leverage abstracted infrastructure services for portability

Have a unified view of all resources whether on-premise or off-premise



Open Cloud Platform

- OpenStack as the de-facto API across environments
- Openstack implementation available in IBM systems and off-premise hosted cloud model
- Share set of services (Computed, storage and network) between environments deliver integration
- HOT for workload definition delivers portability



Cloud Orchestration and Management

Governance & Orchestration Services:

- Eases coordination of complex tasks and workflows, leveraging existing skills, processes and technology artifacts
- Support of OSLC from OASIS

Platform Services:

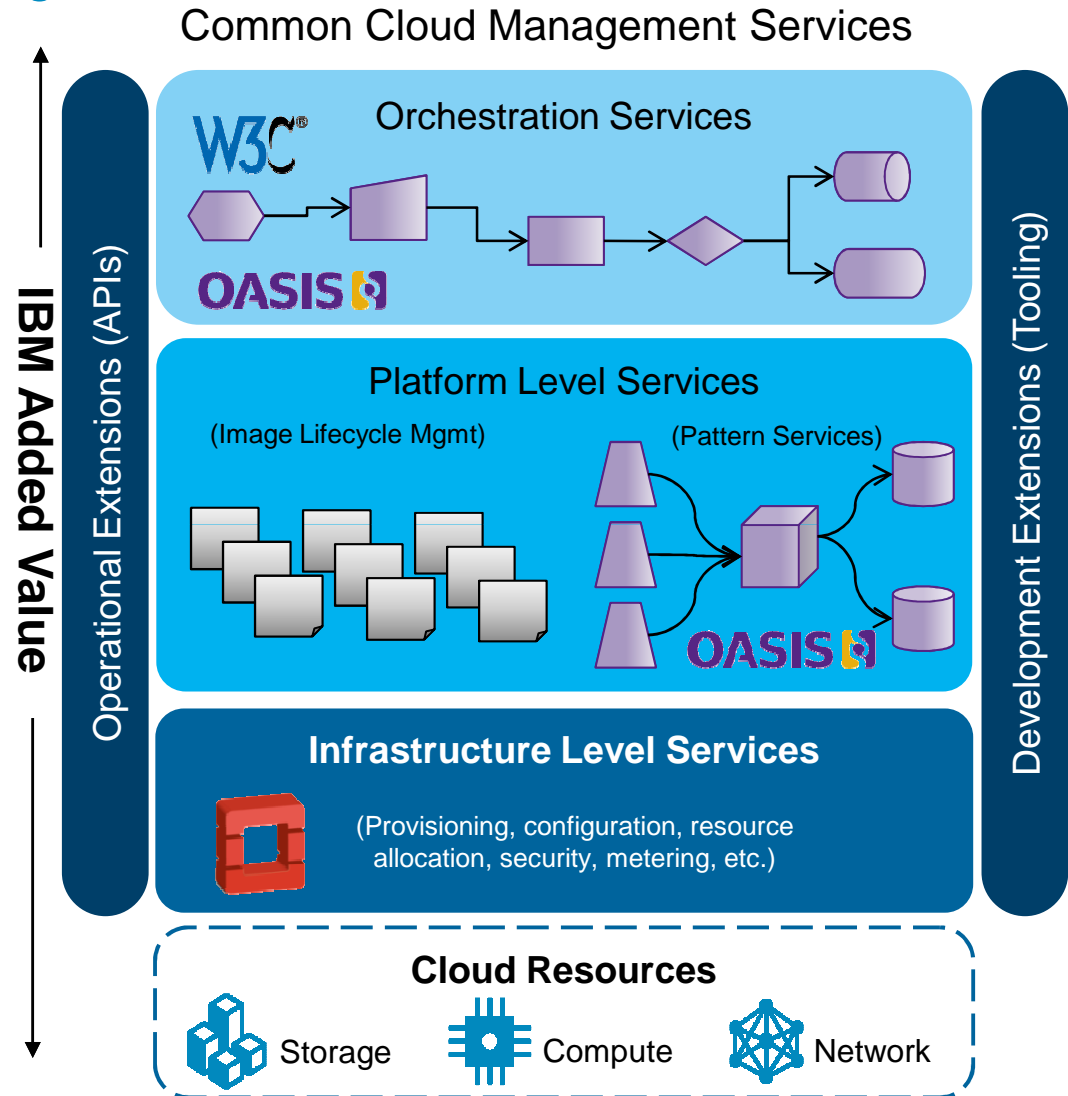
- Simplifies deployment and lifecycle management of middleware and application patterns
- Support of TOSCA from OASIS

Infrastructure Services:

- Highly flexible, scalable infrastructure on heterogeneous resources
- Built on OpenStack

Extensibility:

- Plug and play operational service management integration
- Development tooling integration
- Pre-built images, patterns, process / configuration automation



Cloud Orchestration and Management

Deliver a ready to use software catalog

- Select from one of **200 available patterns**
- Connect to management tools
- Publish in **under 5 minutes**

Leverage templates for rapid service creation

- Automatically integrate with **management systems** (Monitoring, Backup, Security Compliance, and Approvals)
- **No coding** necessary

Bring DevOps principals to your cloud

- Automate the lifecycle of complex, multi-tier applications across development, test and production environments
- Automate the full Continuous Delivery Pipeline, including pushing updates live

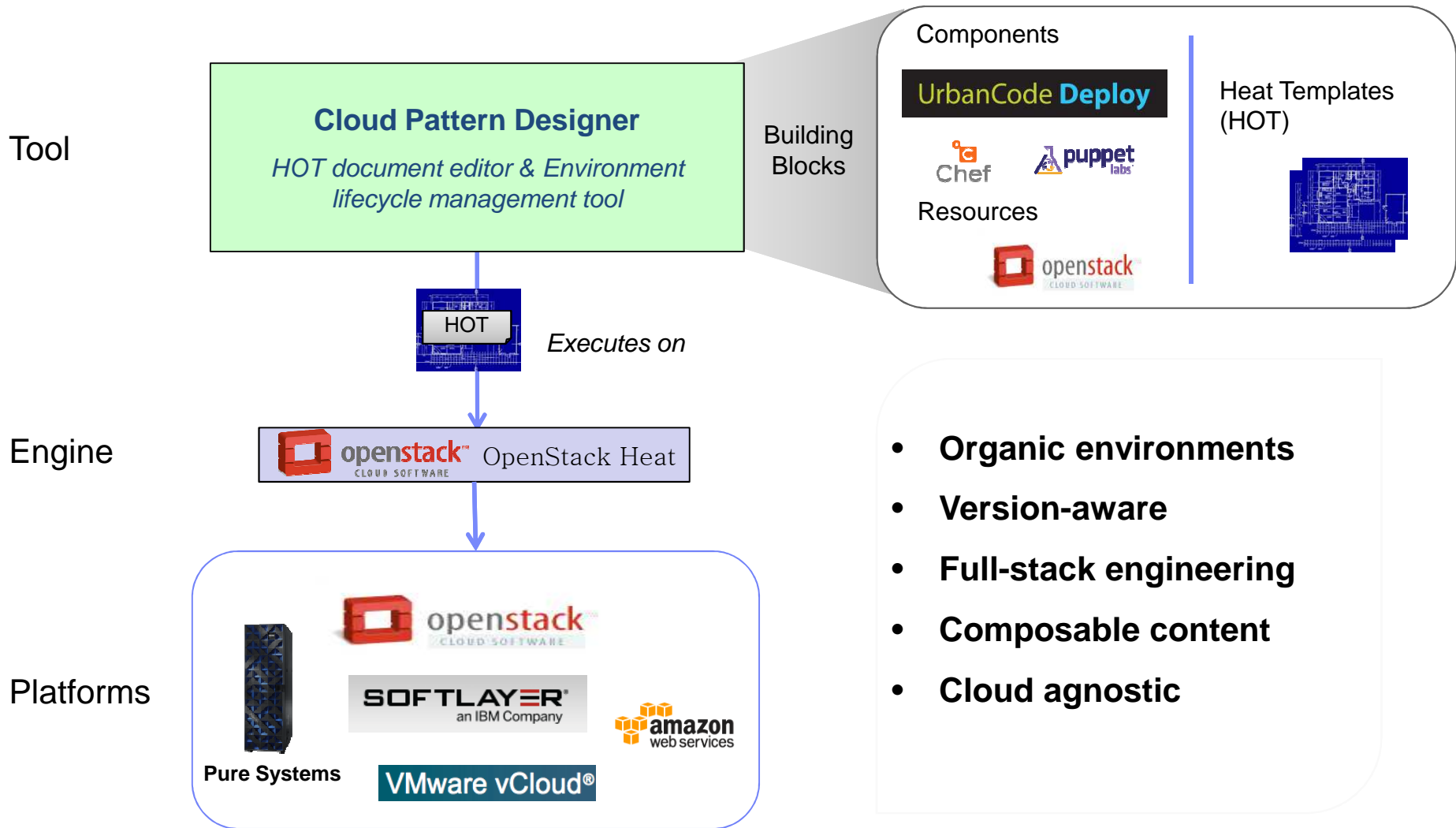
Deploy software on-prem or in public clouds seamlessly

- Orchestrate to connect public and private application components together
- Promote workloads from dev environments to production environments with the same automation

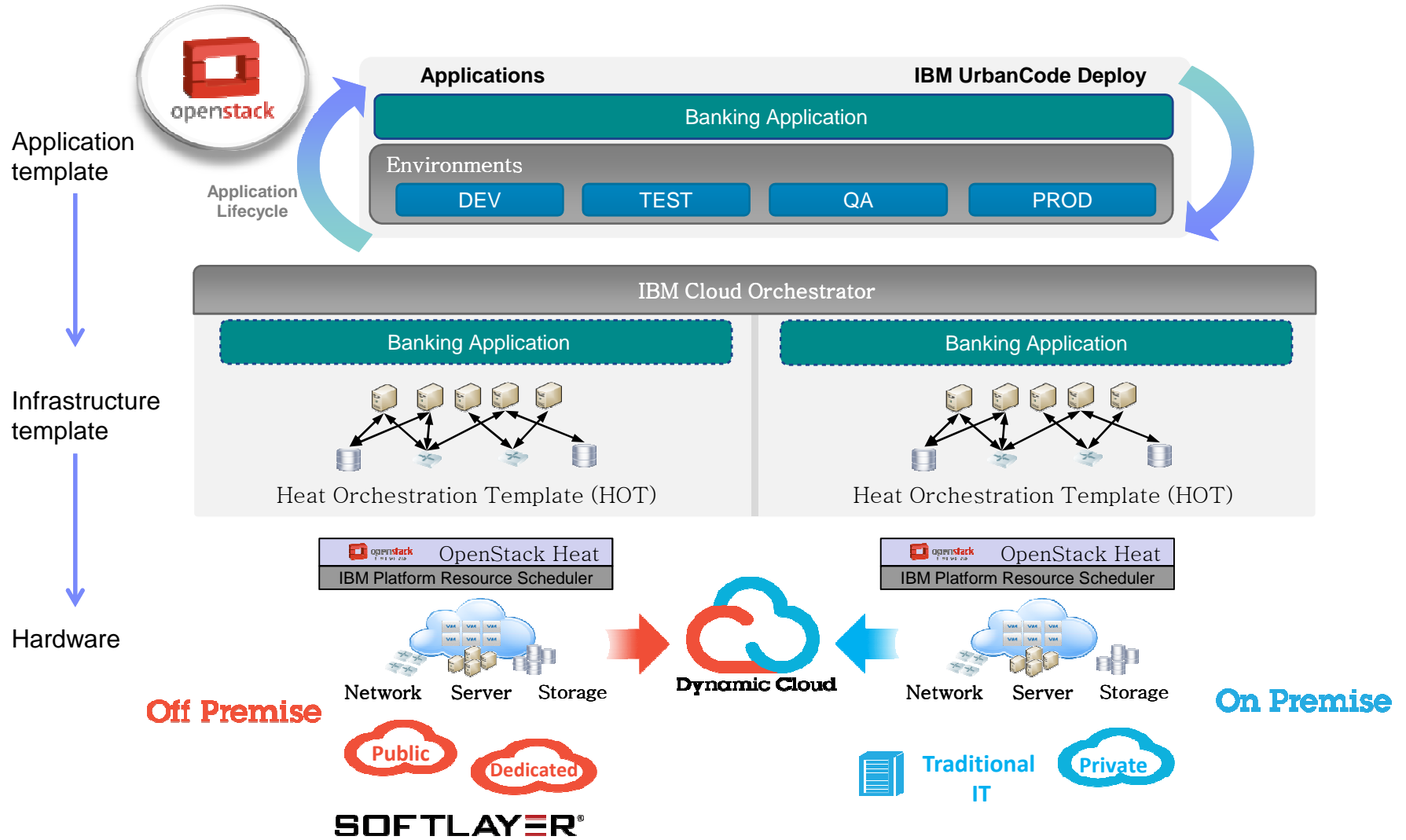


Open Patterns Based Development and Operational Services

A full-stack engineering solution for designing, deploying, and managing environments



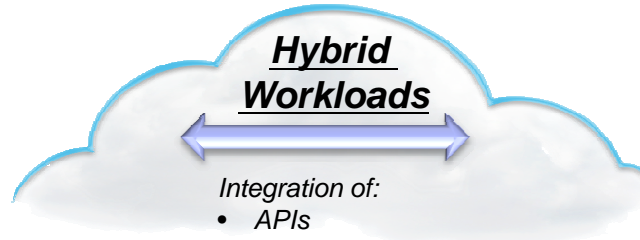
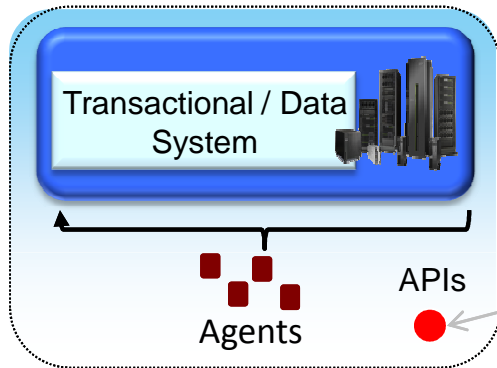
A new model for app deployment & management in hybrid cloud



Transparently running/managing hybrid workloads with hybrid tools

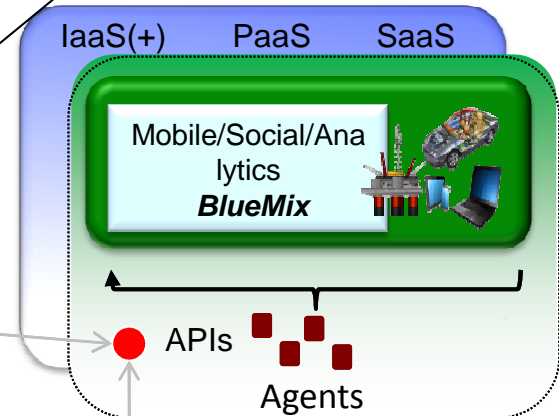
Customer On-Premise

"Cloud Enabled"



...aaS & Cloud (SoftLayer)

"Cloud First"



Management Systems of Record

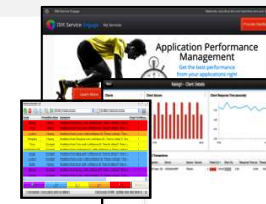
Leveraged across enterprise domains:
correlation of events
agent management capabilities
Local access to large data stores: data access, analytics, protection & performance



Management Systems as a Service

Domain capabilities as a service
Access for **BlueMix** / developers
Continuous delivery of capabilities/updates
Rapid trials, purchase and deployment

Practitioner Designed User Experience
(Developer, Admin, Operations, LoB)



Client Case Study : Toshiba establishes a cloud environment and quickly provisions IaaS and PaaS for its entire enterprise when it implements IBM SmartCloud Orchestrator

TOSHIBA

Challenge:

- To improve business efficiency, Toshiba Corp. had recently **mandated a cloud environment** to support its entire enterprise
- With its multinational data centers populated with technology from multiple vendors, the company needed a **flexible cloud-management platform that would centralize its infrastructure** and enable it to quickly provision Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) solutions for its business units around the globe

Solution:

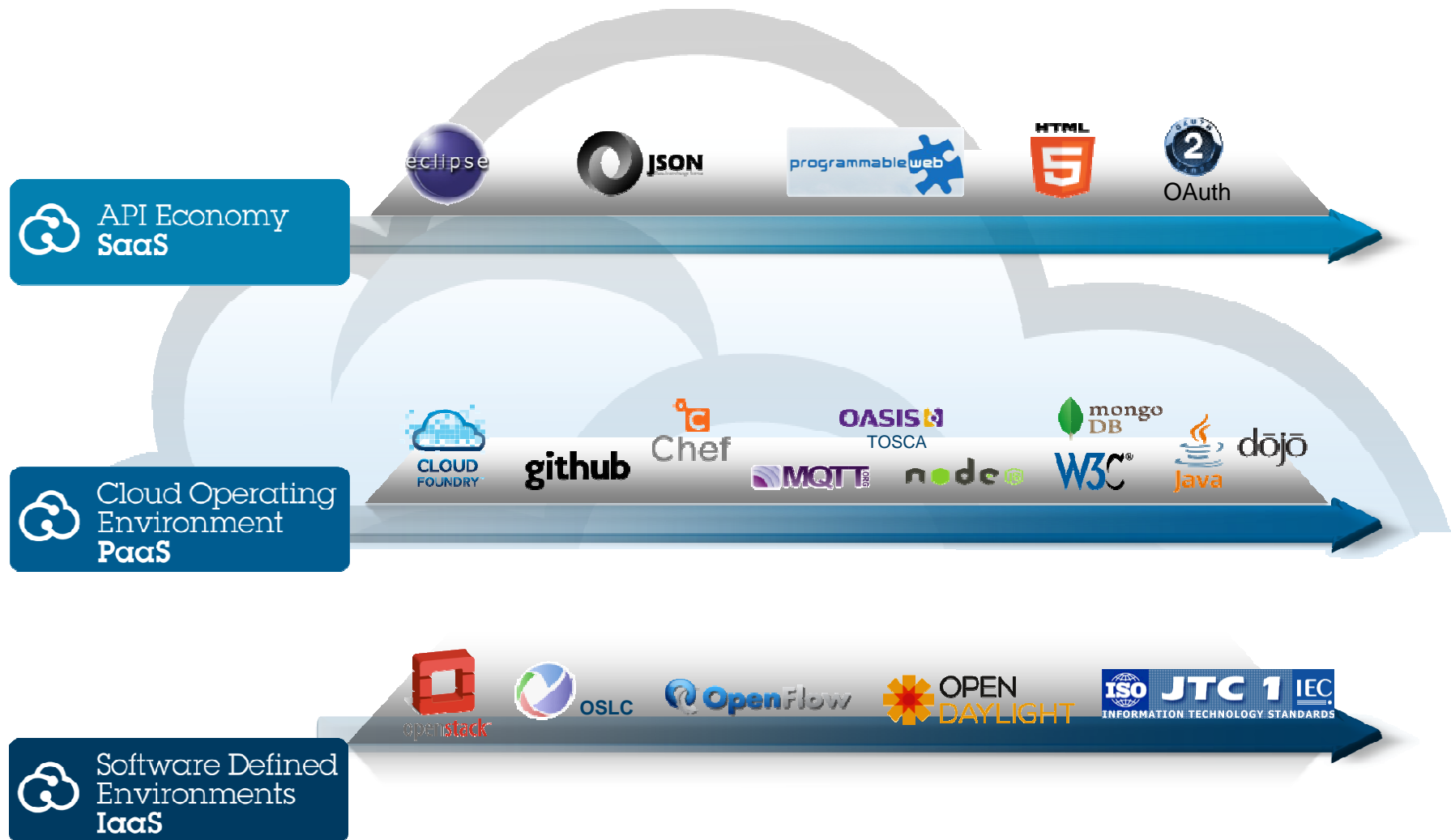
- **IBM SmartCloud Orchestrator** software to provide an open and extensible framework for **managing its heterogeneous cloud environment**
- IaaS technology built on SoftLayer's public infrastructure

Results:

- Converted the hybrid infrastructures at its multinational data centers into a standardized, virtualized cloud environment
- Toshiba can quickly manage and deploy IaaS and PaaS solutions for its business units around the world
- The solution provides visibility into global workload patterns that help the company optimize its delivery of cloud services



'Open' is the only way to achieve a sustainable hybrid cloud



5000 Client Engagement Later ... "Cloud is journey"

