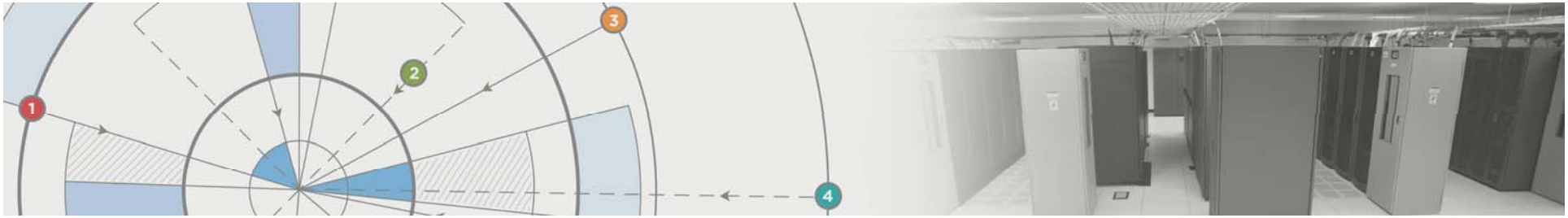


Leveraging Cloud Computing for Disaster Recovery

November 18, 2010

Bill Russell
brussell@bickgroup.com
bill@bluemountainlabs.com

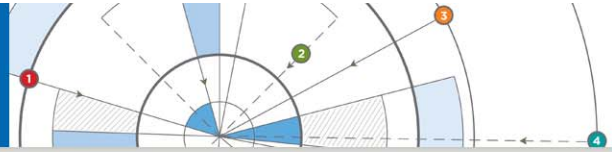
BICK

Mission Critical. Vision Practical.™

AGENDA

- What is Cloud
- How do we leverage it for disaster recovery

Who we are



Bick Group

Internet Data Center

Design-Build pioneer

Bick

Data Center Service and Optimization

Expanded with acquisition

Sealco

Cloud Consulting and Integration

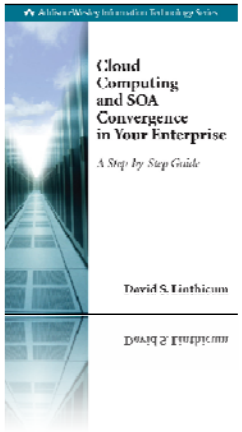
Blue Mountain Labs
A BICK GROUP COMPANY

Enhanced with acquisition

BML

OBLIGATORY CREDIBILITY SLIDE

Blue Mountain Labs
A BICK GROUP COMPANY

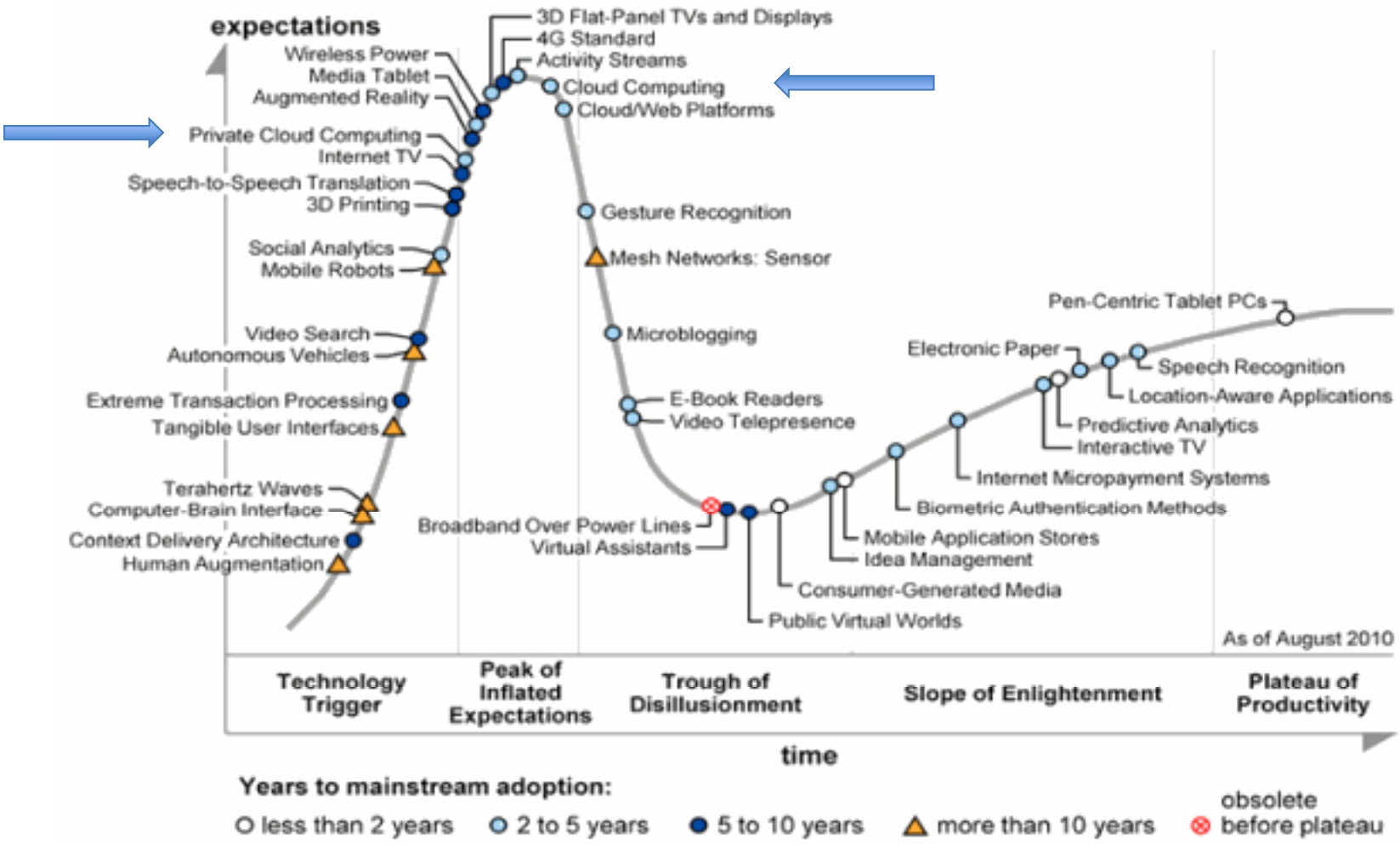


#1
BEST SELLING
BOOK ON
CLOUD COMPUTING

#1
MOST READ
BLOG ON
CLOUD COMPUTING

#1
MOST LISTENED TO PODCAST
ON CLOUD COMPUTING WITH
OVER 10,000 LISTENERS

HYPE

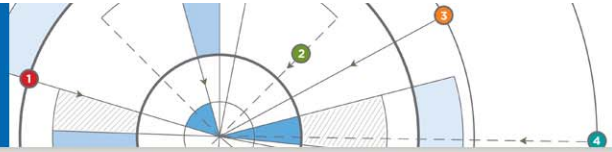


Source: Gartner Research

"How Cloud Computing is Changing the World" BusinessWeek

Primary Source

THE DALLES FACILITY



Undertaken just 5 years ago and located in the northern-most reaches of Oregon along the banks of the Columbia River is what one writer has called

"the information-processing equivalent of a nuclear power plant, a data dynamo of unprecedented power."

ESSENTIAL CHARACTERISTICS

- Self Service Provisioning
- Rapid Elasticity
- Metered Service / Pay as you go
- Resource Pooling
- API
- Broad Network Access

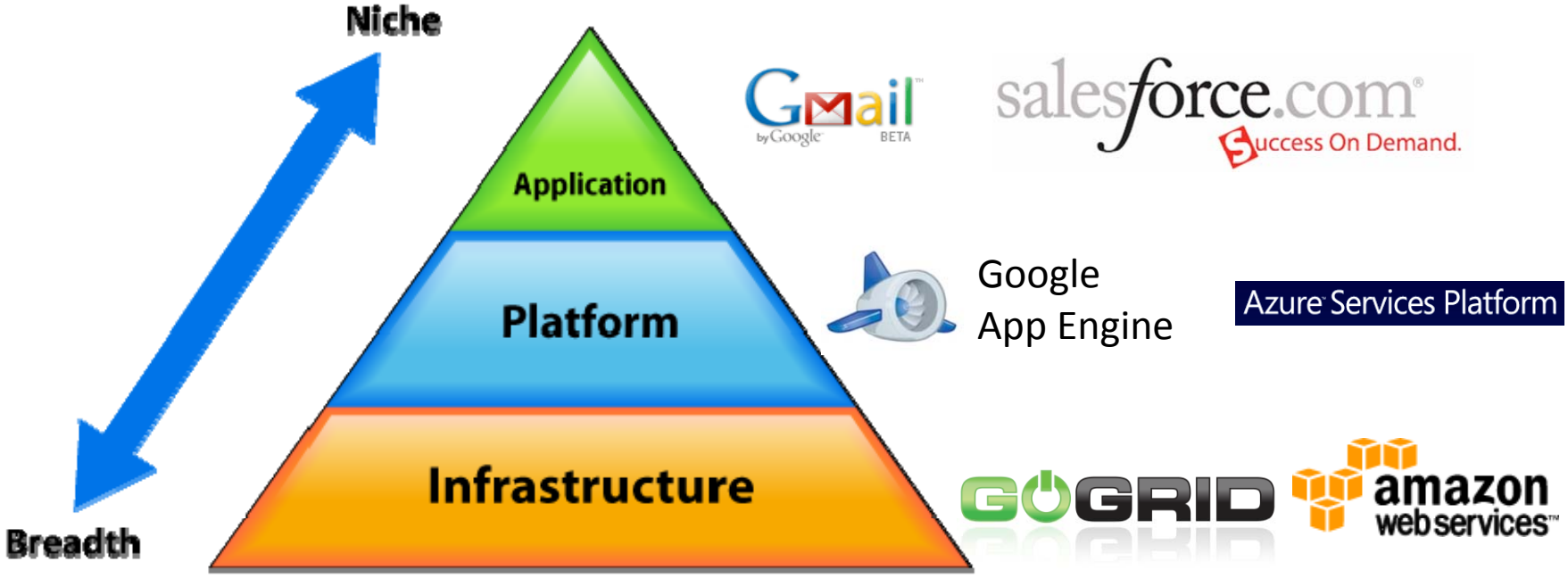
SERVICE MODELS

- Infrastructure as a service (IaaS)
- Platform as a service (PaaS)
- Software as a service (SaaS)

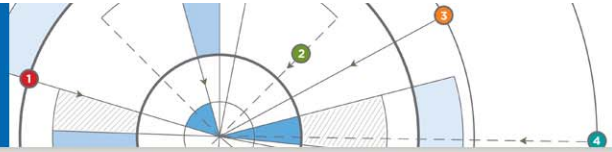
DEPLOYMENT MODELS

- Private Cloud
- Community Cloud
- Public Cloud
- Hybrid Cloud

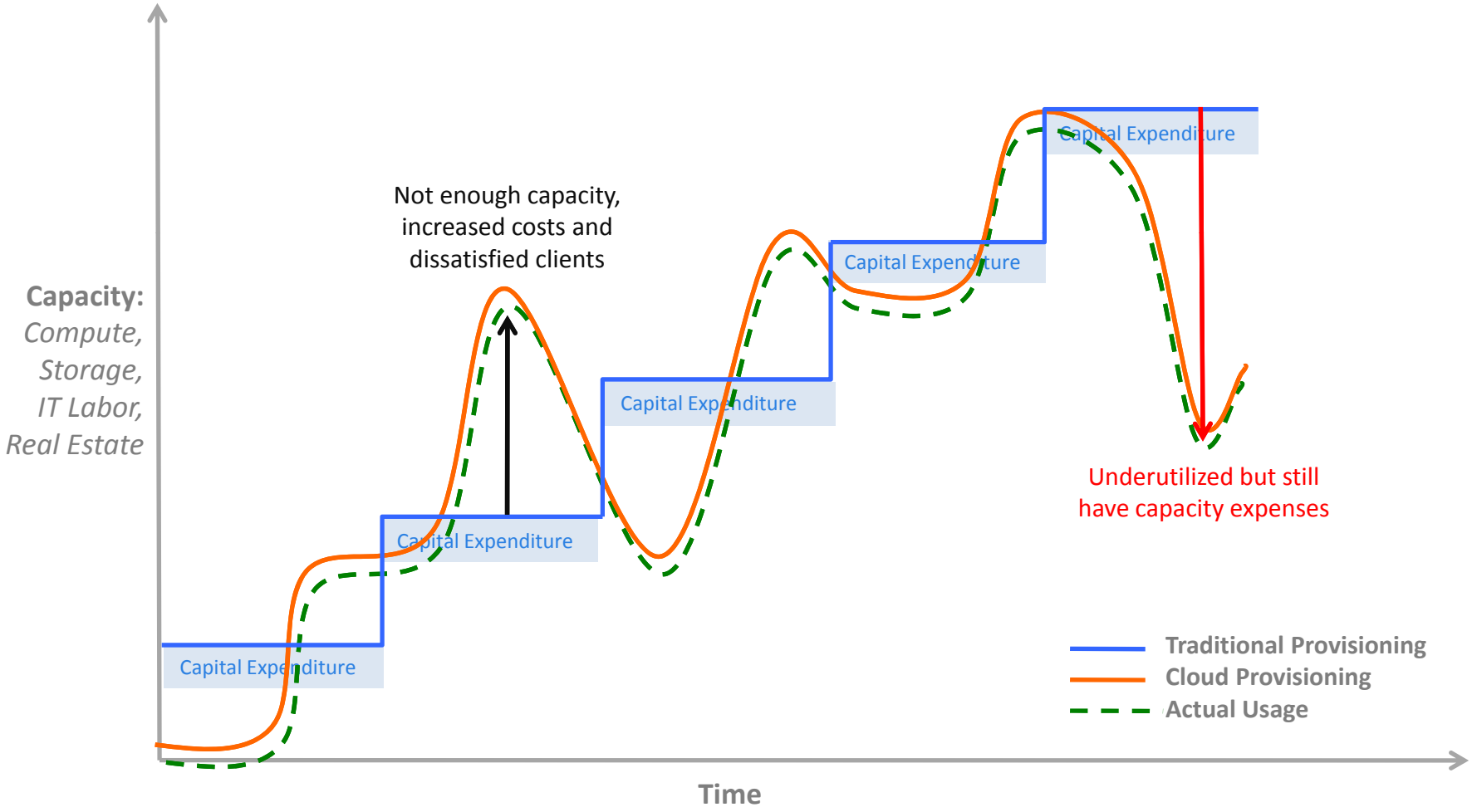
- Building blocks: IaaS -> PaaS -> SaaS



Source: GoGrid



With the cloud, you use and pay for ***only what you need***.



HIGH VALUE TARGETS

IT COST STRUCTURE
(IT infrastructure spending as a percentage of overall IT spending)

HIGH %

- *Telecom*
- *Banking*
- *Healthcare*
- *High-tech*

MED %

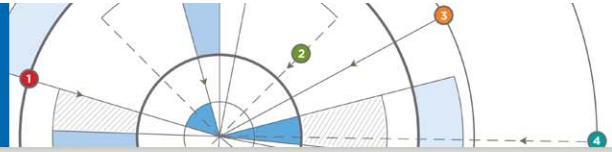
- *Pharmaceuticals*
- *Manufacturing*
- *Insurance*

LOW %

- *Airline industry*
- *Transportation*
- *Benefits administration*
- *Some government entities*

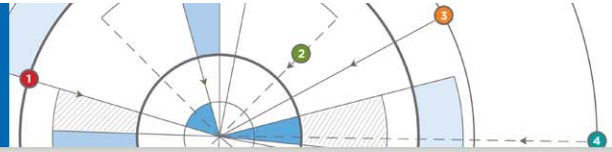
EXISTING IT ENVIRONMENT *(percentage of x86-based compute images)*

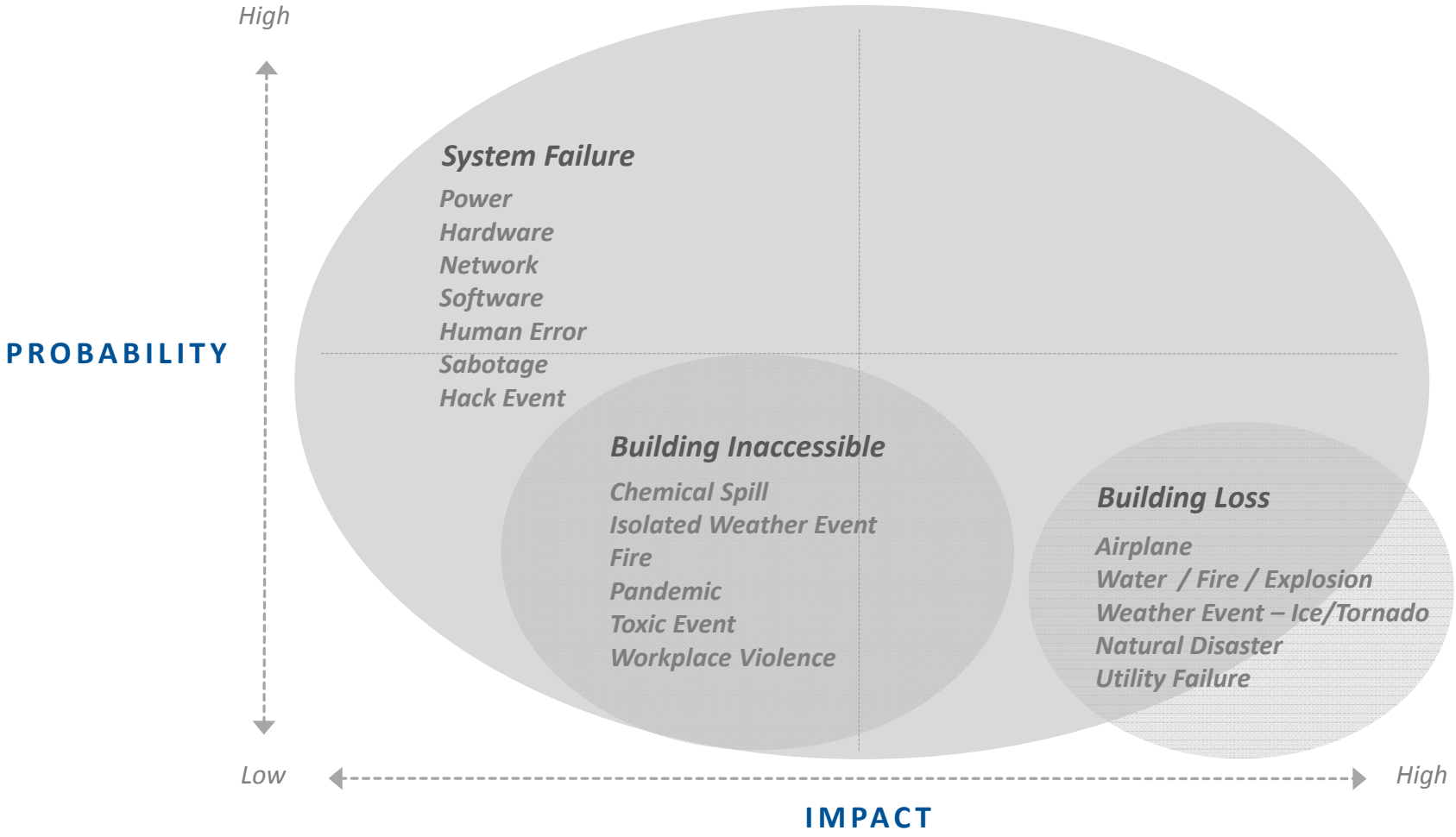
DISASTER RECOVERY



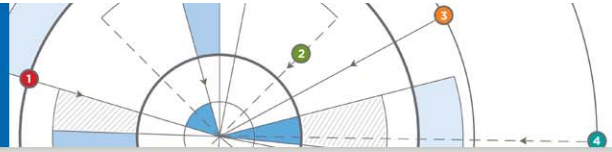
Bick's experience is that because of the small probability of many disasters client may have insufficient disaster recovery plans. However, because the consequences of actual disasters are often business failure clients must not let the small likelihood of a single or particular event bias their judgment

OVERVIEW

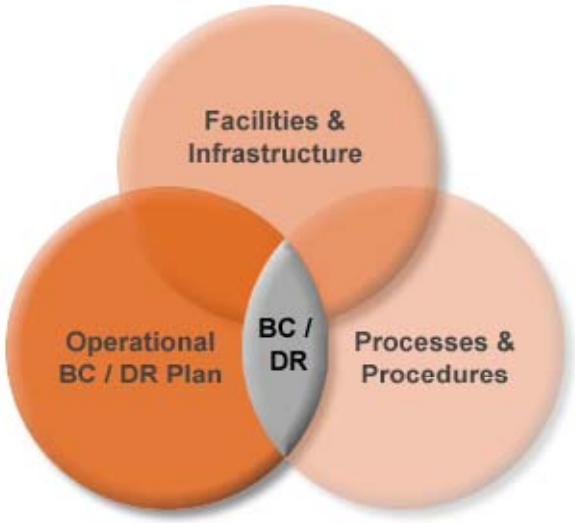




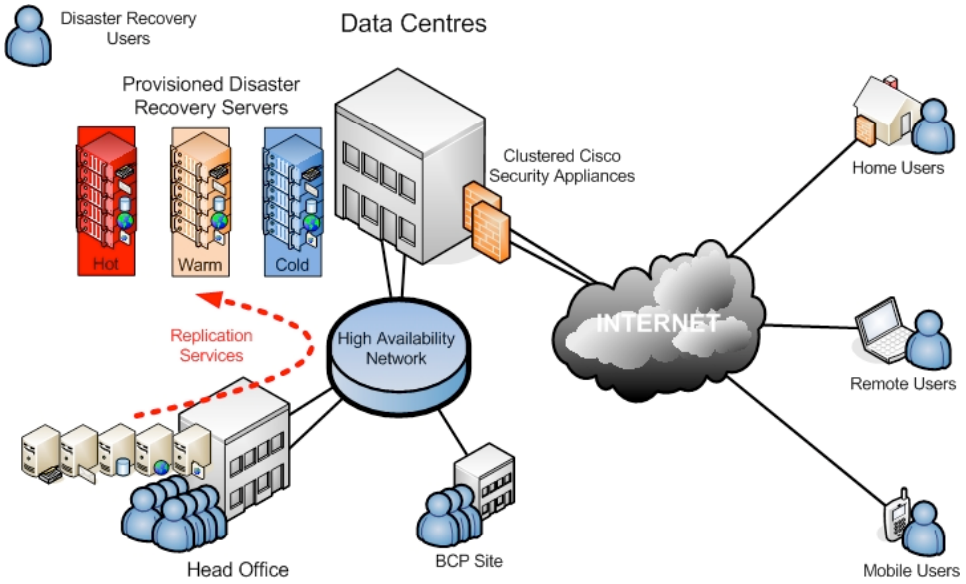
VALUE OF CLOUD AND DR



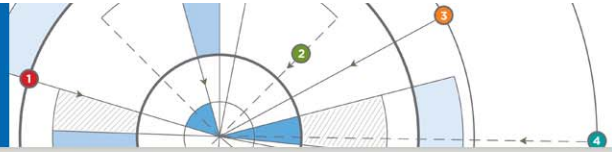
- **Capital and OpEx**
  - NO DATA CENTER INVESTMENT
  - YOU CAN TURN IT ON WHEN NEEDED
  - THIS OPENS OPPORTUNITIES FOR BUSINESSES THAT TYPICALLY COULD NOT AFFORD A BACK-UP CENTER
  - THE DOLLAR ESTIMATE IS THAT THE COST IS ABOUT A FOURTH THAT OF TRADITIONAL BACKUP SITES
  - THE TRICK IS TO FIND THE CLOUD COMPUTING PROVIDER THAT MEETS YOUR DR REQUIREMENTS



VALUE OF CLOUD AND DR

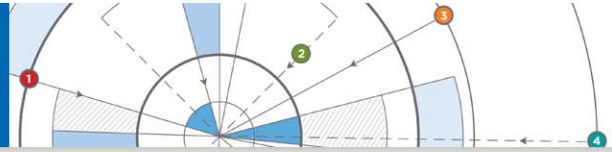


- **THE SECOND, IS THE SPEED IN STANDING UP A SITE**
  - IN MANY CASES, NO NEED TO PURCHASE AND TEST HARDWARE AND SOFTWARE
  - YOU CAN BECOME A CLOUD COMPUTING CUSTOMER TODAY WITH A CREDIT CARD



- **FINALLY, MOST CLOUD-COMPUTING SYSTEMS ARE UBIQUITOUS**
  - THUS, IF YOU HAVE ACCESS TO A BROWSER AND THE INTERNET, THAN YOU CAN ACCESS YOUR CORE BUSINESS SYSTEMS AND CONTINUE YOUR BUSINESS ANYWHERE IN THE WORLD

METHODOLOGY



1. Identify Financial, Operational, and Intangible impacts that a business interruption would introduce

2. Identify interdependencies of the business processes, applications, and technology systems

3. Establish recovery time (RTO) and recovery point (RPO) objectives for critical systems

4. Define priorities for re-instating critical processes and systems based on the requirements defined by the business

Analytic Roadmap

Assessment based on impacts to clients

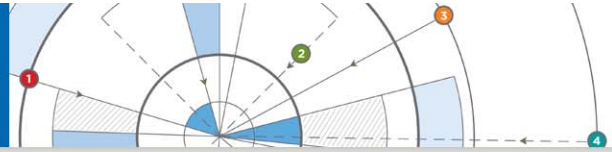
Impacts *Business Impact Analysis Survey*	Revenues produced from clients by Business Service	Client SLA, contracts and business impacts	Client applications (client recovery objectives for applications)	Client supporting business functions and vendors
Priorities *Data Analysis Performed*	Financial analysis on client revenues to define priorities	Impact analysis to define client impact rating	Application RTO & RPO assessment based on client data	Application recovery priority analysis based data and user input
Requirements *Deliverables Produced*	Financial Analysis Scorecard	Client Impact Rating Scorecard	Application RTO/RPO Scorecard	Application Recovery Priority Matrix

OBJECTIVES

Application Recovery Priorities

	Tier 1 (0-24 Hours)			Tier 2 (1-3 Days)	Tier 3 (> 3 Days)		
	Immediate	0-4 Hrs.	4-24 Hrs.	1-3 Days	3-7 Days	1-3 Weeks	>3 Weeks
Network Infrastructure							
Database Infrastructure							
Shared Applications							
Client Dedicated Applications							
General Business/Office Applications							

DISASTER RECOVERY



Single Site
Multiple Sites

Active/Active
Active/Passive
Hybrid

Live or Standby
Level of resiliency

Synchronous
Asynchronous

Facilities ***Function*** ***Network*** ***Data***

SPECTRUM OF CHOICES

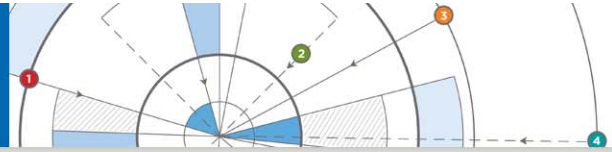
Ownership ***Proximity*** ***Systems***

Parent or **Company**
Own or **Lease**

< 65 miles
> 65 miles

Live or **Standby**
Level of resiliency

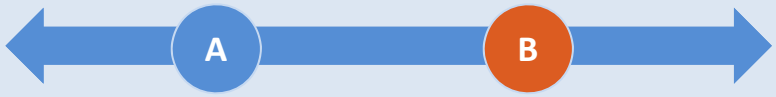
FACILITY OWNERSHIP



PRIMARY ISSUES

- ✓ Control
- ✓ Value
- ✓ Capital

SPECTRUM OF CHOICES



A. Own

B. Lease

Recommendation

REASON #1
Control

- ✓ Some control is lost in a lease situation

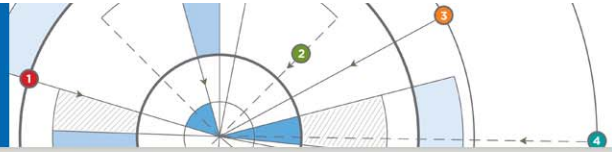
REASON #2
Value

- ✓ Owning is a bad investment
- ✓ Better Facility

REASON #3
Capital

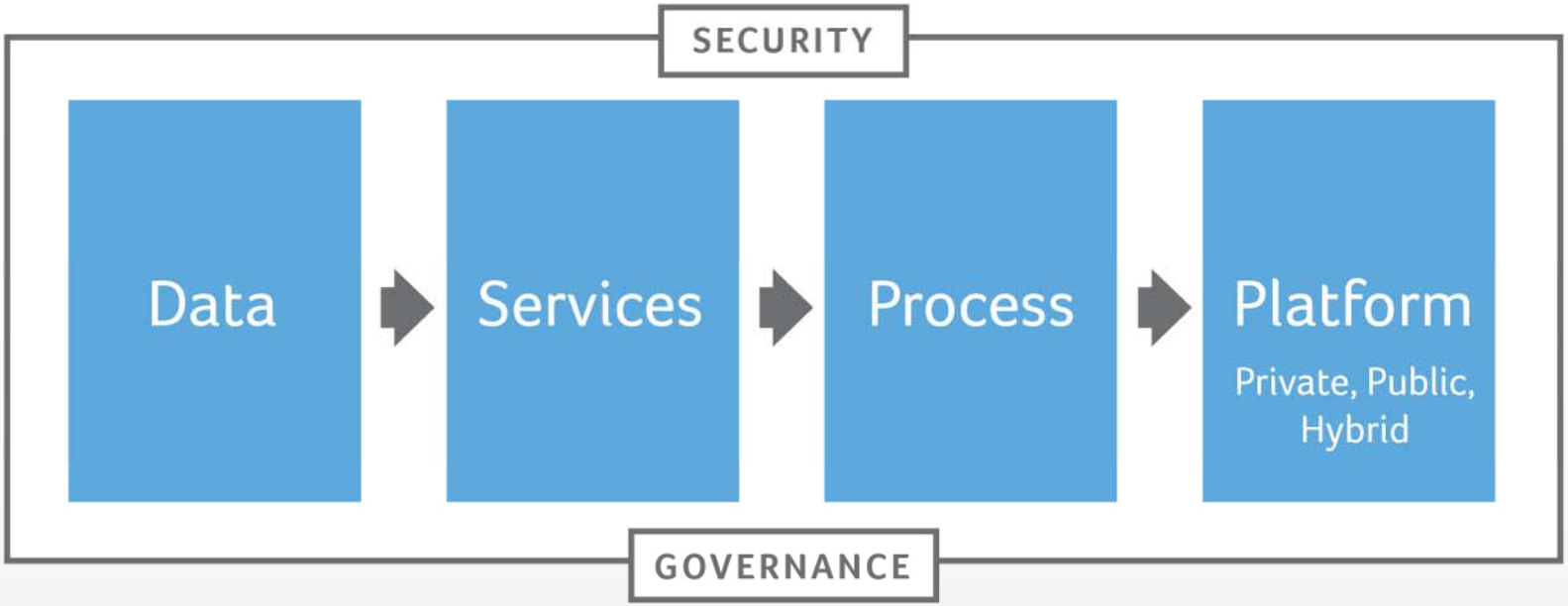
- ✓ Less capital
- ✓ Owner will spend to keep facility current due to competitive pressures

“TO BE”

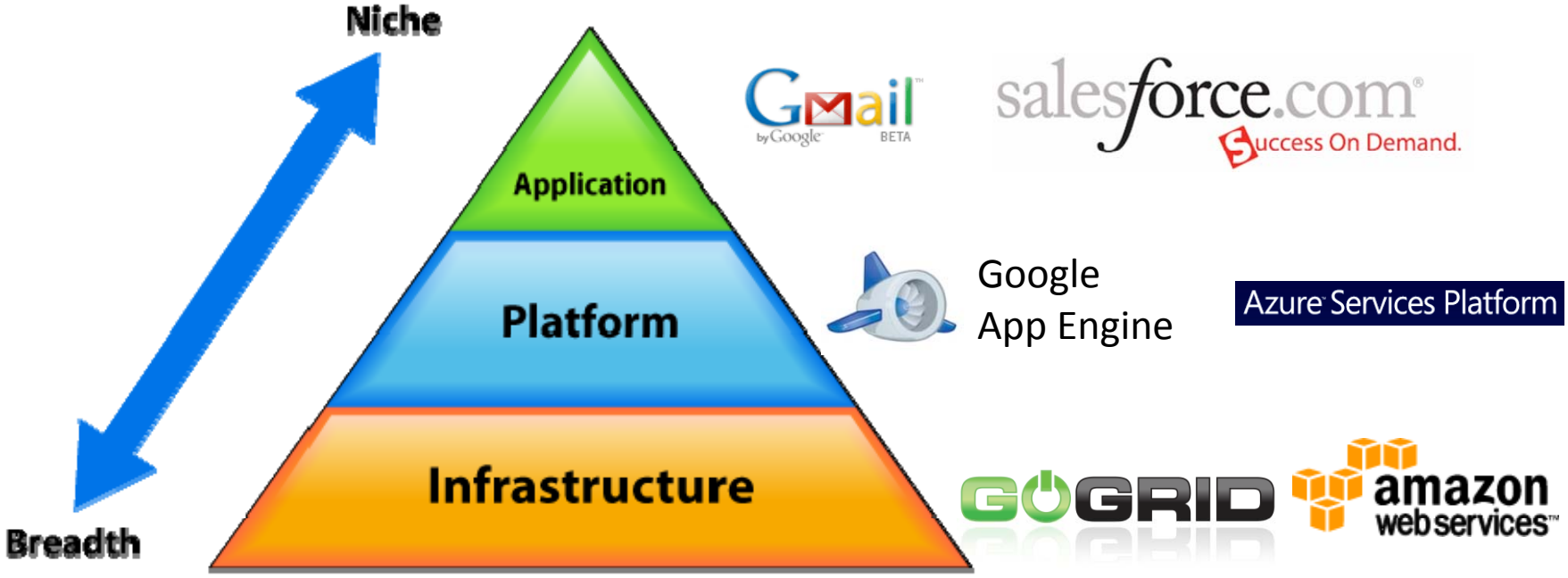


For the Cloud

AS-IS | TO BE | DEPLOY

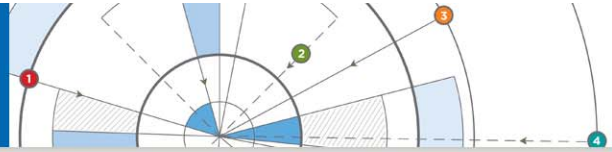


- Building blocks: IaaS -> PaaS -> SaaS



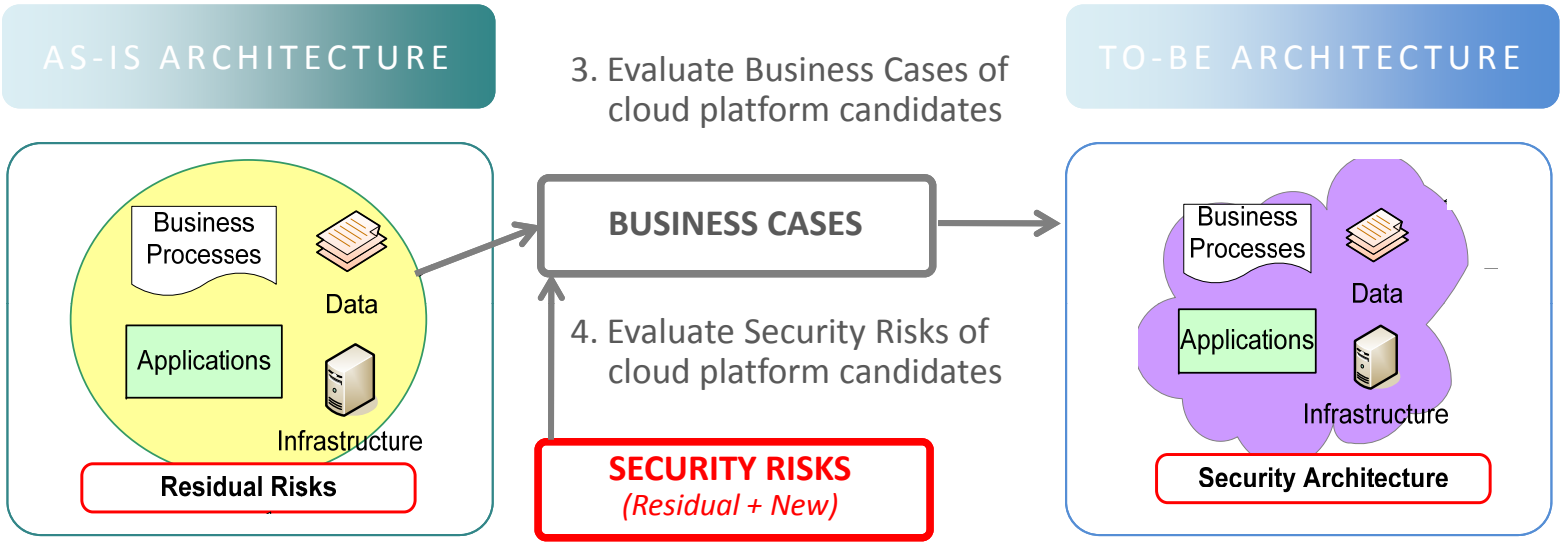
Source: GoGrid

A HIGH LEVEL PROCESS



1. Understand and document the "As-is" Architecture and major challenges

5. Define the "To-Be" Architecture



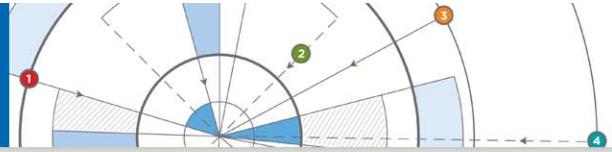
2. Select candidate business processes, services, applications, data, and supporting infrastructure for cloud platforms

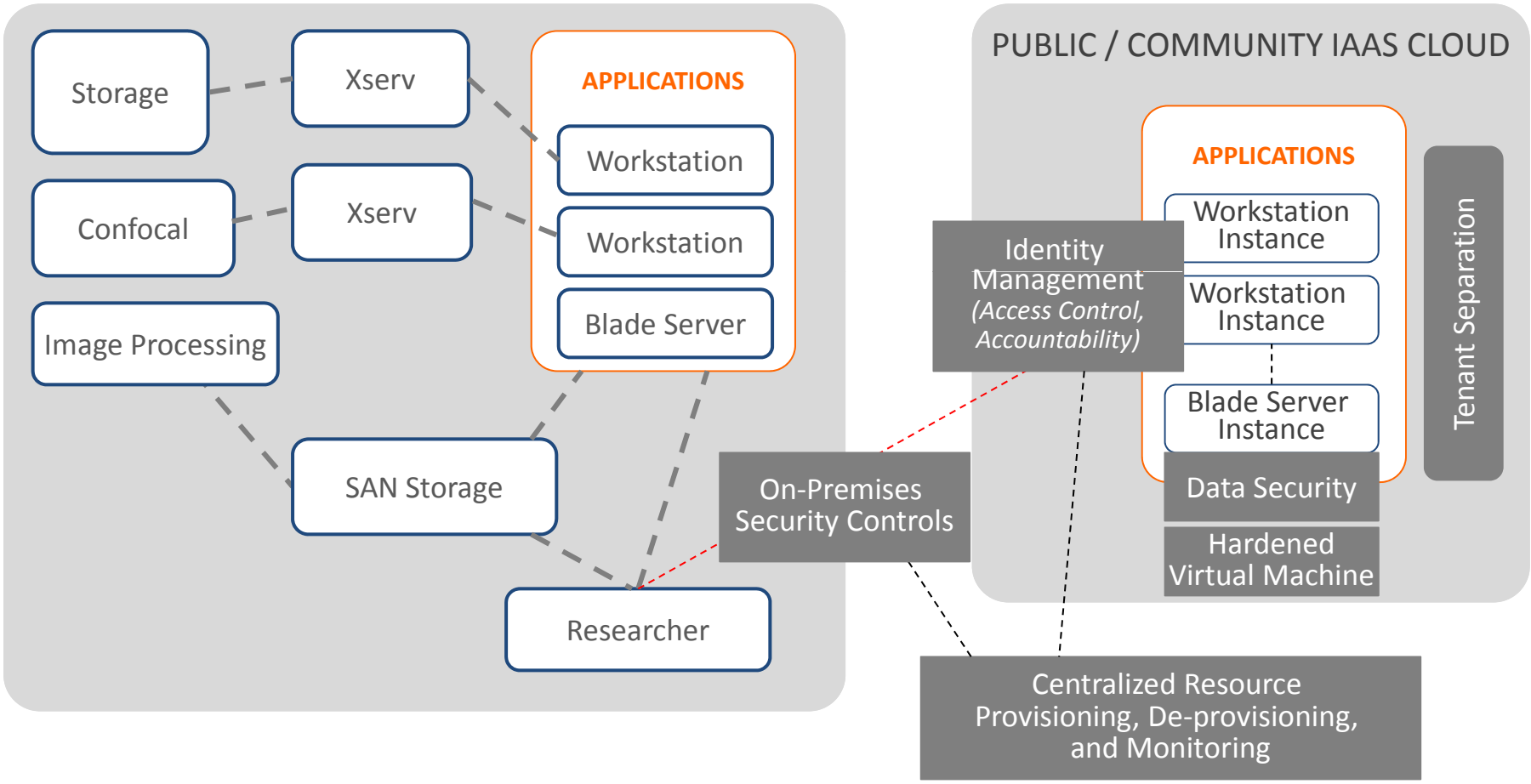
6. Develop cost and migration plan, cloud vendor analysis and evaluation and final recommendations

For the Cloud

AS-IS → TO BE → DEPLOY

HIGH LEVEL APPLICATION INSTANCE





FINAL WORDS OF ADVICE

Let the business requirements lead you, not the hype.

Make sure to consider security and governance as systemic concepts.

Make sure to consider performance and scalability.

Understand the hard and soft costs up front.

Leverage SOA approaches and best practices.

Never lose control of your data

Understand all compliance issues up front.

Don’t be afraid to start over, if needed.

Learn all you can before starting the project.

THANKS!

BLOGS

InfoWorld, Intelligent Enterprise, eBizq.net

WEEKLY PODCASTS

Cloud Computing Podcast

COLUMNS

SOA World Magazine, Cloud Computing Journal

Follow me on Twitter (BillatBML)
Follow Dave on Twitter (DavidLinthicum)

We Build Clouds.

Bill Russell
brussell@bickgroup.com

David Linthicum
dlinthicum@bickgroup.com