Delivering a Continuity solution through Organizational Resilience

Anthony A. Barone

Organizational Resilience

Organizational Resilience (OR) is not in and of itself, but rather a product of incorporating sound organizational practices. Our clients achieve **OR** through our modular approach that leverages leading practices from various disciplines.

Program & Project Management	Business Continuity Management	Risk Management	Comprehensive Emergency Management	Comprehensive Planning & Preparedness

Our **OR** solution is enhanced by integrating proprietary methodologies of past proven success, and customizing an organizational-specific **OR** solution.

Collaborative Business Experience ™	Accelerated Solution Environment	Organization Change Management	Process Evaluation & Improvement	Business Information Management

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Resilience and Continuity

THE WHITE HOUSE

WASHINGTON

May 9, 2007

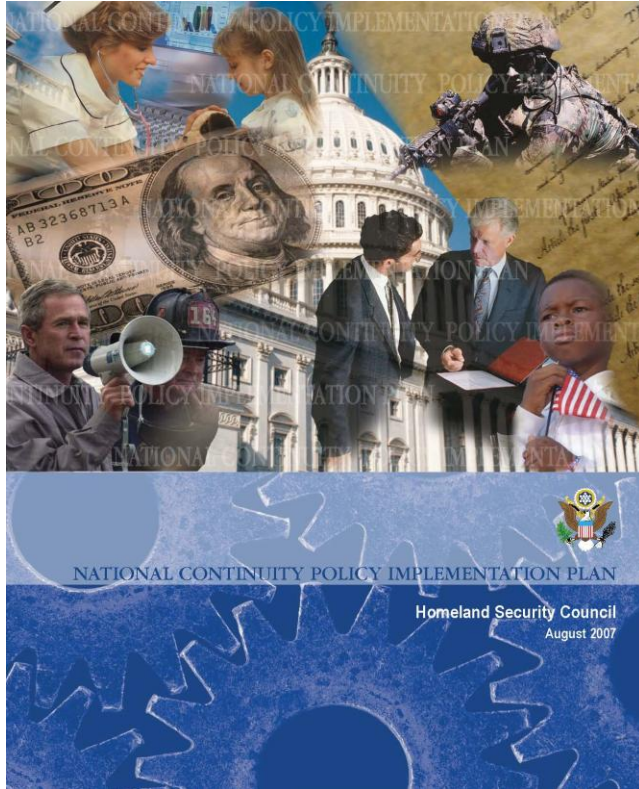NATIONAL SEURITY PRESIDENTIAL DIRECTIVE (NSPD)-51/

HOMELAND SECURITY PRESIDENTIAL DIRECTIVE (HSPD)-20

NATIONAL CONTINUITY POLICY

National Security Presidential Directive (NSPD-51)/ Homeland Security Presidential Directive (HSPD-20) National Continuity Policy

- This presidential directive establishes a comprehensive national policy on the continuity of the Federal government structures and operations.

- This policy establishes "National Essential Functions," prescribes continuity requirements for all executive departments and agencies, and provides guidance for State, local, territorial, and tribal governments, and private sector organizations in order to ensure a comprehensive and integrated national continuity program that will enhance the credibility of our national security posture and enabled a more rapid and effective response to and recovery from a national emergency.

http://www.fas.org/irp/offdocs/nspd/nspd-51.htm

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Resilience and Continuity

NATIONAL CONTINUITY POLICY IMPLEMENTATION PLAN

Homeland Security Council
August 2007

National Continuity Policy Implementation Plan (NCPIP)

- This *Implementation Plan* builds upon the *National Continuity Policy* and provides guidance to executive departments and agencies on appropriately identifying and carrying out their Primary Mission Essential Functions that support the eight National Essential Functions.

- This Implementation Plan also articulates a recommitment of focus in the executive branch and highlights the importance of our partnership with other branches of the Federal Government, other levels of government, and the private sector.

http://www.fema.gov/pdf/about/org/ncp/ncpip.pdf

Resilience and Continuity

Continuity Guidance Circular 1 (CGC 1)

Continuity Guidance for Non-Federal Entities

(States, Territories, Tribal, and Local Government Jurisdictions and Private Sector Organizations)

January 21, 2009

FEMA

Continuity Guidance Circular (CGC)-1

- This directive provides operational guidance to non-Federal entities for the development of continuity plans and programs in support of the implementation the *National Continuity Policy*

- Effective continuity planning and programs facilitate the performance of essential functions during all-hazard emergencies or other situations that may disrupt normal operations.

- The primary goal is the continuation of essential functions.

- The provisions of this CGC are applicable for State, local, territorial and tribal governments and the private sector.

http://www.fema.gov/pdf/about/org/ncp/cont_guidance1.pdf (2009)

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Resilience and Continuity

Federal Continuity Directive 1
Federal Executive Branch National Continuity Program and
Requirements

October 2012

Homeland
Security

Federal Continuity Directive (FCD)-1

- This directive provides operational guidance to implementation the *National Continuity Policy* for the Federal Executive Branch.

- Effective continuity planning and programs enhance the **resilience** of organizations and facilitate the performance of essential functions during all-hazard emergencies or other situations that may disrupt normal operations.

- The provisions of this FCD are applicable at all levels of Federal Executive Branch organizations regardless of their location, including regional and field locations.

- This directive emphasizes **Program Management** and **Risk Management** implementation and integration.
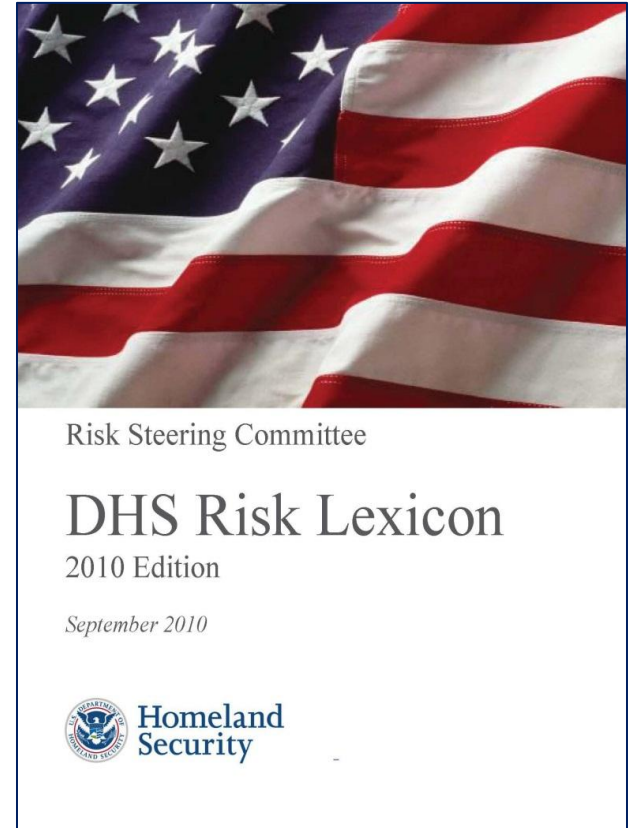
http://www.fema.gov/pdf/about/offices/fcd1.pdf (v.2008)

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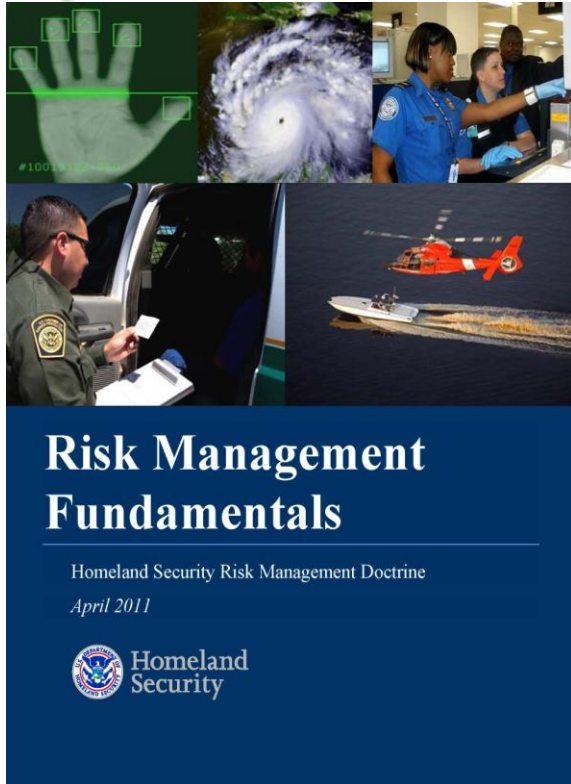
Resilience and Risk Management

- "*Risk management* is the process for identifying, analyzing, and communicating risk and accepting, avoiding, transferring, or controlling it to an acceptable level considering associated costs and benefits of any actions taken."

  - DHS Risk Lexicon, 2010 Edition

  http://www.dhs.gov/xlibrary/assets/dhs-risk-lexicon-2010.pdf

Risk Steering Committee

DHS Risk Lexicon

2010 Edition

September 2010

Homeland Security

Resilience and Risk Management

Risk Management Fundamentals

Homeland Security Risk Management Doctrine

April 2011

Homeland Security

Risk Management Fundamentals

- The first in a series of publications that provide a structured approach for the distribution and employment of risk information and analysis efforts across the Department

- Produced by the Office of Risk Management and Analysis, in coordination with the Office of Policy, has been vetted and approved by the DHS Risk Steering Committee

- Pursuant to the authority vested in the Under Secretary for the National Protection and Programs Directorate by the Secretary of Homeland Security in Delegation Number 17001 to lead the Department's efforts to establish a common framework to address the overall management and analysis of homeland security risk, this publication is hereby recognized and approved for official use until revised or superseded.

http://www.dhs.gov/xlibrary/assets/rma-risk-management-fundamentals.pdf

Resilience and Risk Management

The Homeland Security Risk Management Process

- Define and frame the context of decisions and related goals and objectives

- Identify risks associated with goals and objectives

- Analyze and assess identified risks

- Develop alternative actions for managing risks and creating opportunities, and analyzing the costs and benefits of those alternatives

- Make a decision among alternatives and implement that decision

- Monitor the implemented decision and compare observed and expected effects to help influence subsequent risk management alternatives and decisions

DEFINE THE CONTEXT

IDENTIFY POTENTIAL RISK

EVALUATE & MONITOR

COMMUNICATION

DECIDE & IMPLEMENT

ASSESS & ANALYZE RISK

DEVELOP ALTERNATIVES

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Resilience and Risk Management

One of the foundational concepts of homeland security is the need to build **resilient** systems, communities, and institutions that are robust, adaptable and have the capacity for rapid recovery. **Resilience** and risk management are mutually reinforcing concepts.

Risk management contributes to the achievement of **resilience** by identifying opportunities to build **resilience** into planning and resourcing to achieve risk reduction in advance of a hazard, as well as enabling the mitigation of consequences of any disasters that do occur.

Resilience and Risk Management

- The value of a risk management approach or strategy to decision makers is not in the promotion of a particular course of action, but rather in the ability to distinguish between various choices within the larger context

Risk management is not an end in and of itself,
but rather part of sound organizational practices that include

| Planning | Preparedness | Program Evaluation | Process Improvement | Budget Priority Development |

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Organizational Resilience Enhanced ! ! !

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Collaborative Business Experience™

The best way for us to work for you is to work with you. The Collaborative Business Experience™ helps you define the rules of the game, rather than be limited by them.

Capgemini at your side: enabling concrete business results through a people-centered approach to technology.

Collaboration is central to the Capgemini philosophy and a pillar of our service delivery. From strategy development through to implementation, clients benefit from our tailored approach. Working beside you every step of the way, we analyze your challenges and guide you through your transformation.

Our collaborative tools and methodologies give you the freedom to transform and overcome resistance to change. We channel the expertise of our leading technology partners, putting the right tools in the hands of your teams.

http://www.capgemini.com/about/how-we-work/the-collaborative-business-experiencetm

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Collaborative Business Experience™

Guided by the 4 dimensions of collaboration, we target value, mitigate risk, optimize capabilities, and align the organization to achieve the objective:

Targeting Value

To improve performance, you have to know exactly what you want to achieve and then establish targets all along the path your project will take.

Mitigating Risk

Project failure is a major concern. This dimension reflects Capgemini's attention to understanding the stakes of an initiative, and the level of risk our client perceives to be inherent in the initiative. This allows Capgemini to manage these risks, reducing the chance that obstacles will slow down value realization.
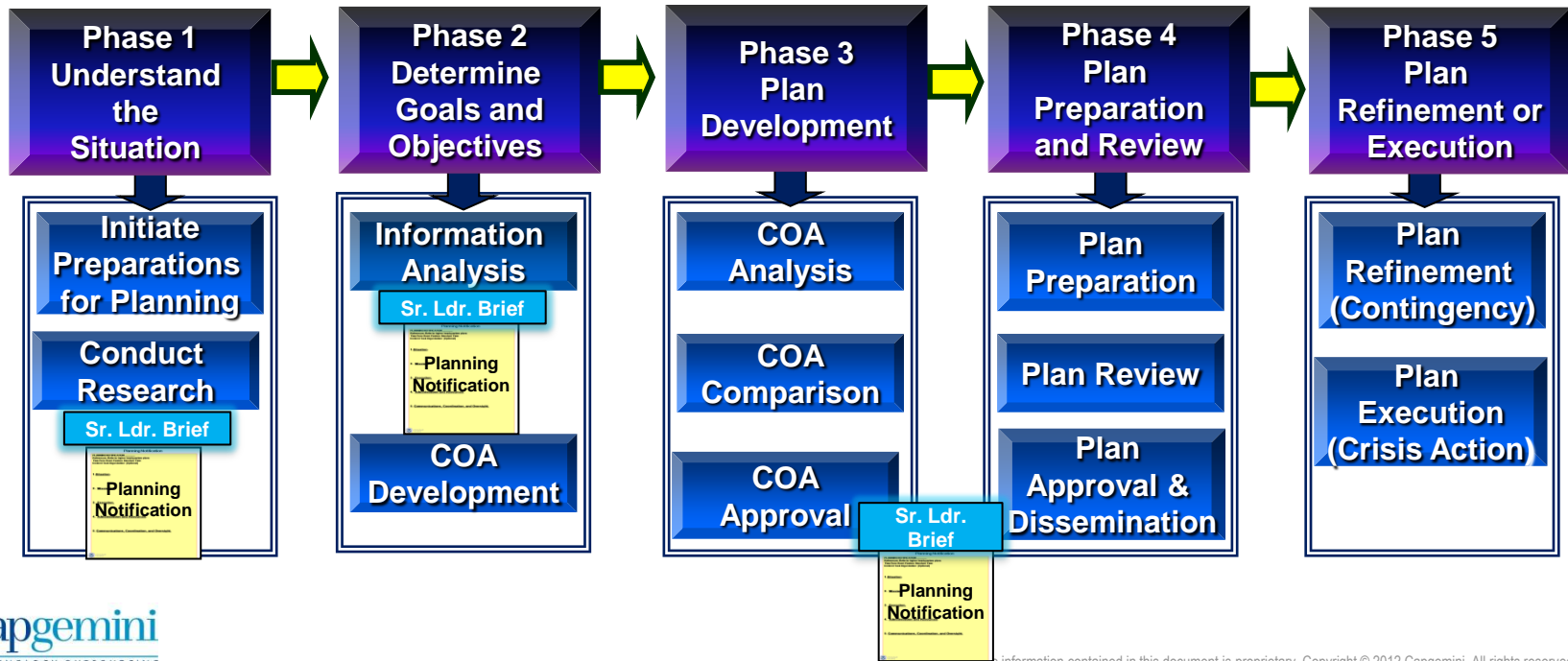
Optimizing Capabilities

The optimizing capabilities dimension refers to the two-way transfer of knowledge during the project, and to efforts by Capgemini and our clients to ensure that the know-how and support necessary to sustain the value of the project is in place upon completion of the initiative.
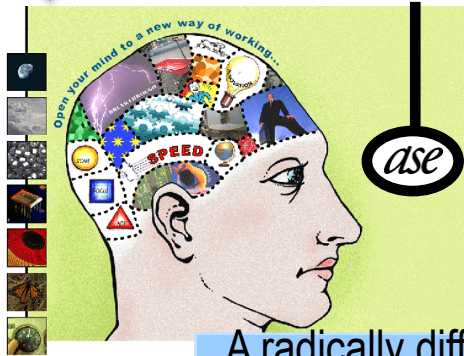
Aligning the Organization

Initiatives often fail to provide lasting value because implementation fails or is delayed within the organization. This failure can result from a number of causes. Knowing what might inhibit implementation can shape the nature of a collaborative project and accelerate the realization of project value.

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Collaborative Business Experience™ Demonstrated

- Our Collaborative Business Experience™ is demonstrated through the solution alignment of organizational requirements and practices (*e.g. Federal Plan Development Process)*
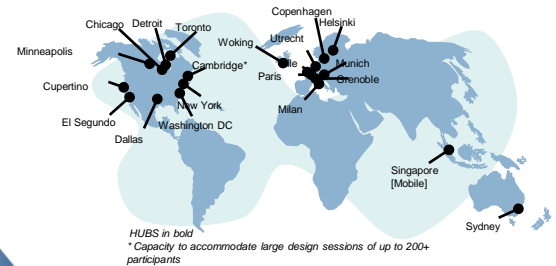
**Phase 1
Understand
the
Situation**

**Phase 2
Determine
Goals and
Objectives**

**Phase 3
Plan
Development**

**Phase 4
Plan
Preparation
and Review**

**Phase 5
Plan
Refinement or
Execution**

Initiate Preparations for Planning

Conduct Research

Sr. Ldr. Brief

Planning Notification

Information Analysis

Sr. Ldr. Brief

Planning Notification

COA Development

COA Analysis

COA Comparison

COA Approval

Sr. Ldr. Brief

Planning Notification

Plan Preparation

Plan Review

Plan Approval & Dissemination

Plan Refinement (Contingency)

Plan Execution (Crisis Action)

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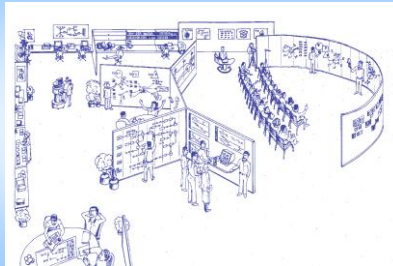
Accelerated Solution Environment (ASE)

An environment which enables a wide number of people from diverse backgrounds to come together in pursuit of a common goal.

It creates an intense atmosphere designed to foster creative thinking and collaboration, delivering implementable solutions weeks or months ahead of conventional approaches

Innovative **Knowledge Rich**

Open and *Flexible* **CREATIVE**

Collaborative **TECHNOLOGY ENABLED**

A radically different way of collaborative work.

HUBS in bold
* Capacity to accommodate large design sessions of up to 200+ participants

Value Delivered

- achieves decisions that would not otherwise be made
- 6 months work is completed in 3 days
- creates ownership
- speed to benefit realisation
- greater benefit realisation

Scan **Focus** **Act**
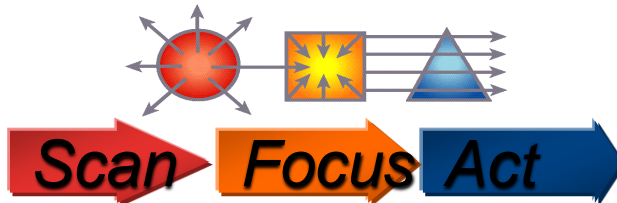
Accelerated Solution Environment (ASE)

Accelerated Solutions Environment

Acceleration
make business decisions in hours and days, rather than months and years

Innovation
unleash group genius to craft a more robust and creative solution than any individual effort

Alignment
mobilize diverse stakeholders to implement collectively created solutions

Risk Management
reduce rework and extended feedback cycles to accelerate sign off

The ASE Process

Scan
- Build the foundation for a high-performance team
- Explore and understand the facts and implications
- Engage with industry specialists
- Create a common language
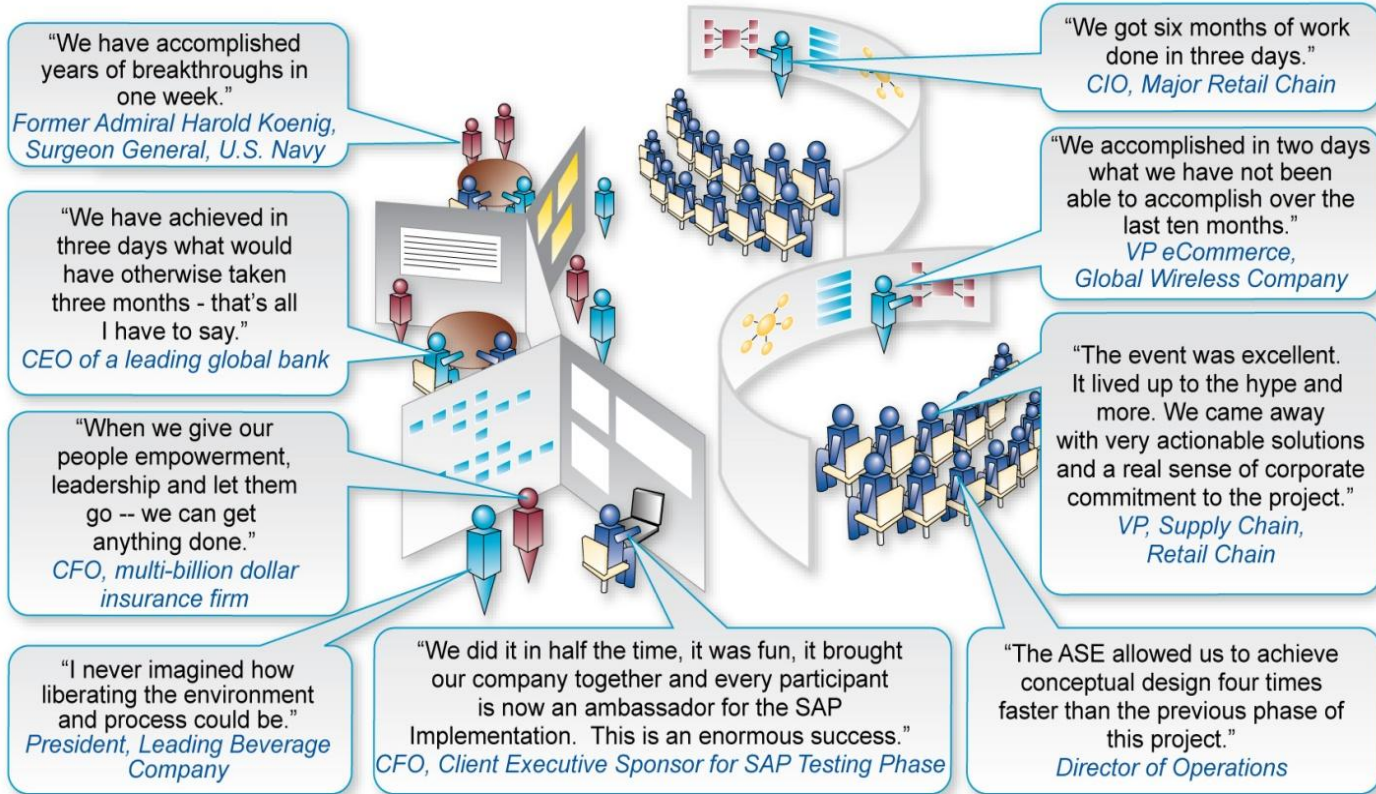- Uncover critical assumptions and issues

Focus
- Conduct scenarios and simulations
- Test and evaluate hypothesis/alternatives
- Build, combine and iterate models
- Uncover and remove barriers to change
- Clarify expectations

Act
- Create group alignment and intention to act
- Make definitive decisions
- Engineer all aspects of the solution through parallel processing
- Establish detailed short and medium-term action plans

11-522-007-1

Accelerated Solution Environment (ASE) Demonstrated

"We have accomplished years of breakthroughs in one week."
Former Admiral Harold Koenig, Surgeon General, U.S. Navy

"We have achieved in three days what would have otherwise taken three months - that's all I have to say."
CEO of a leading global bank

"When we give our people empowerment, leadership and let them go -- we can get anything done."
CFO, multi-billion dollar insurance firm

"I never imagined how liberating the environment and process could be."
President, Leading Beverage Company

"We did it in half the time, it was fun, it brought our company together and every participant is now an ambassador for the SAP Implementation. This is an enormous success."
CFO, Client Executive Sponsor for SAP Testing Phase

"We got six months of work done in three days."
CIO, Major Retail Chain

"We accomplished in two days what we have not been able to accomplish over the last ten months."
VP eCommerce, Global Wireless Company

"The event was excellent. It lived up to the hype and more. We came away with very actionable solutions and a real sense of corporate commitment to the project."
VP, Supply Chain, Retail Chain

"The ASE allowed us to achieve conceptual design four times faster than the previous phase of this project."
Director of Operations

08-104-003-2

Setting the Stage for Cloud Enabled Business Continuity

Expensive, inefficient, outdated, and inadequate disaster recovery (DR) and lack of compliance with Federal guidance on continuity of operations

- **Captial expenditures** required for dedicated infrastructure for DR
  - Organizations spend a significant portion of hardware/software/operations budgets on **seldom-used,** premise-based non-production environments

- Typical DR solutions have **low utilization** and tend to "sit idle" and wait for a disaster to occur
  - Idling servers and storage still use up space, power, HVAC, operations resources

- **Hardware/software refresh** on DR environments is required to maintain currency with production servers and storage
  - Leading practices require DR facilities to be close or equivalent to production infrastructure

- **DR testing is often difficult** and thus not performed with enough frequency and duration to assure adequate protection to the business in the event of a disaster
  - Scripted cloud-based testing is easier to perform and encourages more frequent testing frequency

- National Security Presidential Directive-51/Homeland Security Presidential Directive-20 (NSPD-51/HSPD-20) provide Federal guidance on full business continuity, not just infrastructure, and presents a compliance **challenge in light of reduced staff and budgets**
  - To be compliant, Agencies must demonstrate DR/failover capabilities in their application and service infrastructure AND have well-defined organizational and leadership continuity plans

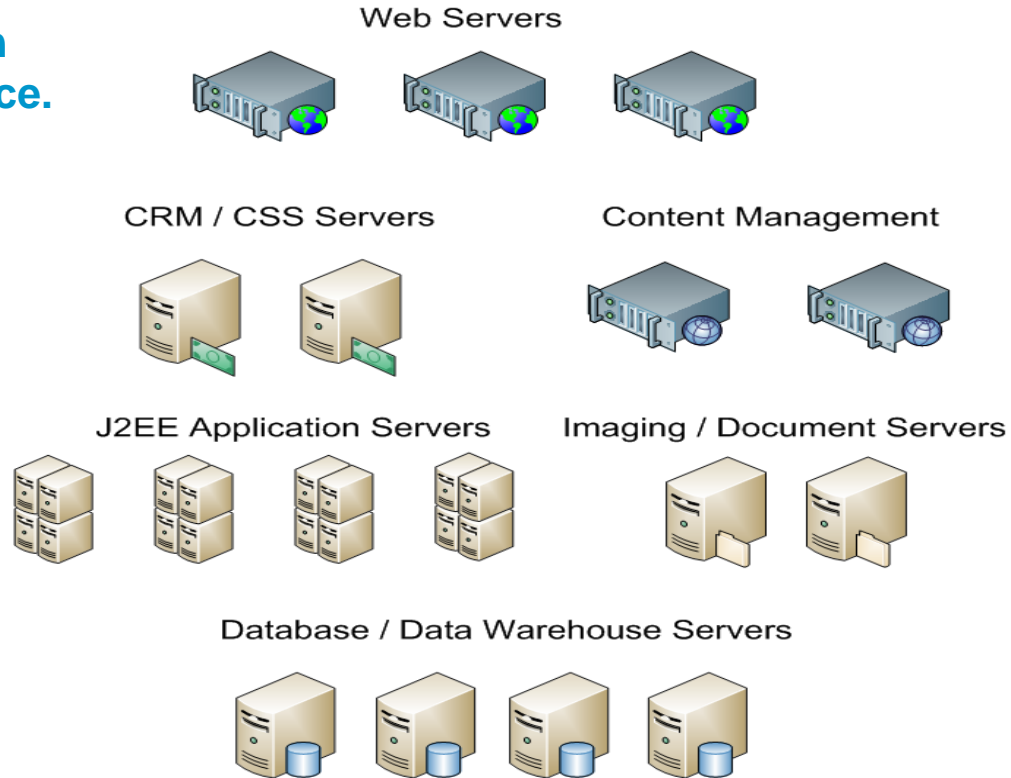# Cloud Enabled Business Continuity Benefits

A Cloud enabling Business Continuity approach allows an Agency to implement a comprehensive cloud-based continuity of operations program for their application infrastructure, providing on-demand DR capabilities through a secure cloud service provider.

- Cloud-based infrastructure can be ramped-up quickly when needed for testing or production failover.

- Full production capacity available in a FISMA-compliant data center.

- Agency pays only for resources used and only when needed.

- Environments can migrate as needed

- Responsibility for redundancy moves from the Agency to the provider

- Significant Cost reductions

- Improvement in RPO and RTO over traditional approaches

- Possible increases in security of Data

A Real World Example – Capgemini Tax / UI Offering

Capgemini offers an end to end solution for taxation and unemployment insurance. This solution is based on J2EE, and involves multiple software products as well as custom code. It includes many layers such as:

- Web Servers

- CRM and CSS Servers

- Content Management

- Application Servers

- Imaging and Document management

- Database and Data Warehouse

- Identity and Access Management

Web Servers

CRM / CSS Servers

Content Management

J2EE Application Servers

Imaging / Document Servers

Database / Data Warehouse Servers

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The Traditional Continuity Approach

Production Environment

Web Servers

CRM / CSS Servers

Content Management

J2EE Application Servers

Imaging / Document Servers

Database / Data Warehouse Servers
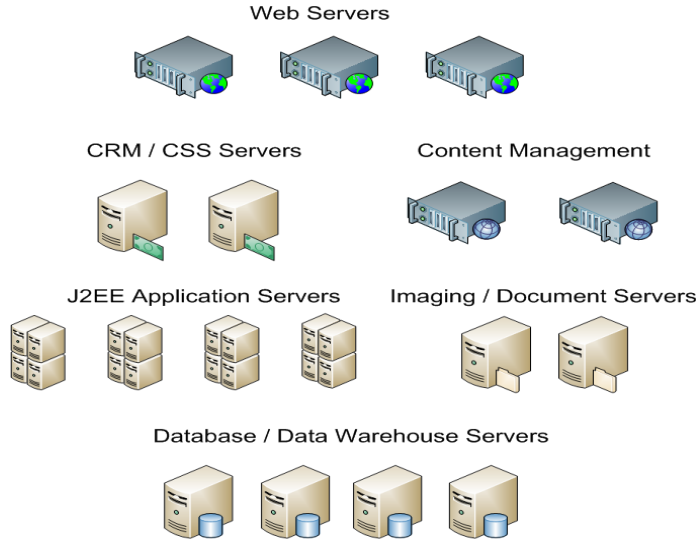
Continuity Environment

Web Servers

CRM / CSS Servers

Content Management
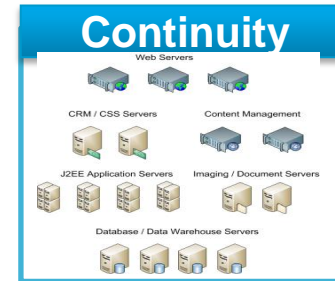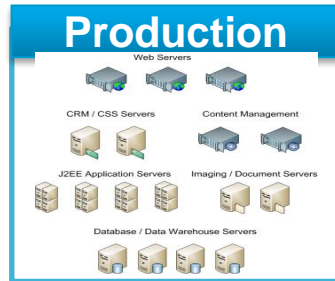
J2EE Application Servers

Imaging / Document Servers

Database / Data Warehouse Servers
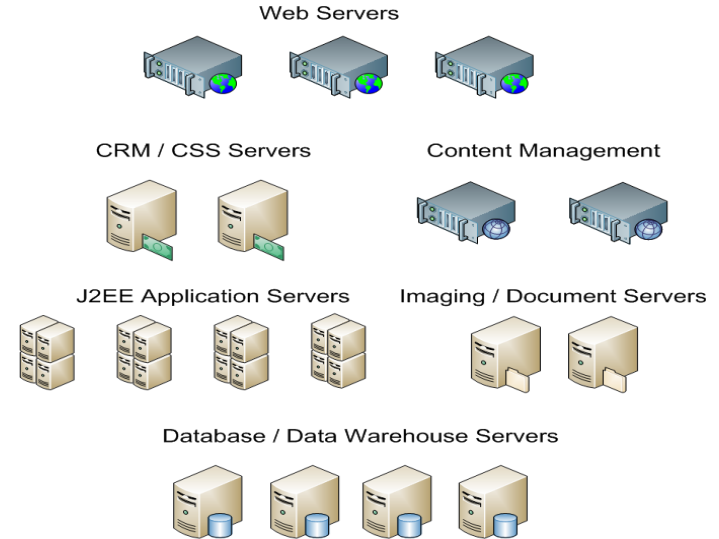
100% Redundancy – Complete duplicate , active only in the case of an extended outage in a primary production environment.

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But There are Also Other Environments

Production

Continuity

Development

Testing

UAT / Demo

Training

Performance Test / Pre - Production
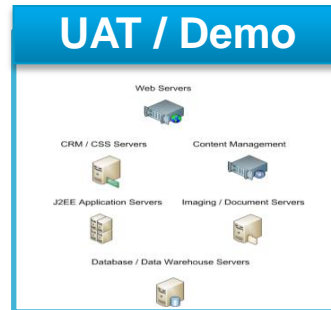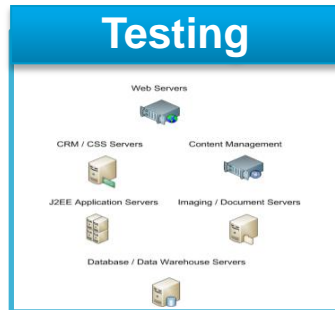
The Full scope of a solution involves significant numbers of computers, hardware and software. Annual licenses, hardware refresh costs, power, cooling, network and cabling all add to the Total Cost of Ownership (TCO).

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Utilization is Low for Most Environments…

Production

Average utilization: 15-30%

Continuity

Average utilization: 1%

Development

Testing

UAT / Demo

Training

Performance Test / Pre - Production

Utilization is low for all non-production environments. Agencies are paying for environments that sit idle the vast majority of time. Cloud Enablement allows an Agency to pay a fraction of the TCO of traditional costs by using Pay as You Use Models.
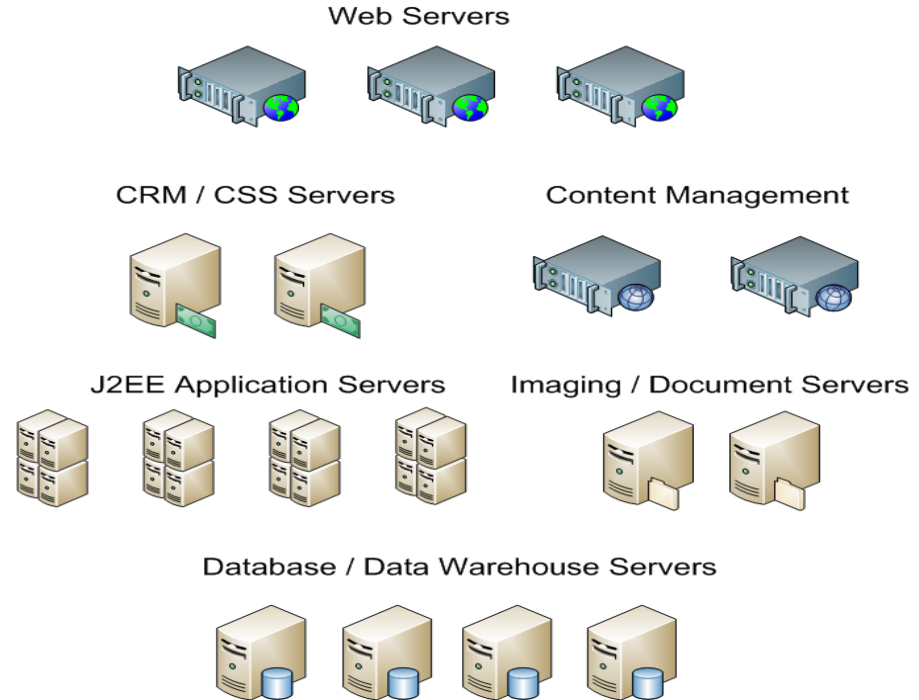
A Little More Detail

A typical PRODUCTION deployment:

- 48 total computers
- 67 CPUs
- 616 Cores
- 60 TB SAN storage

Premised Based information:

- Year One Includes:
  - 9.7M Software licenses
  - 3.1M Hardware
- Annual License costs:
  - 1.8M (732k in Database)
- Hardware refresh over 10 years (3 refresh)
  - 3.1M per refresh = 9.3M
- **Total cost over 10 years = 40.1M(12.8M + 18M + 9.3M)**

Web Servers

CRM / CSS Servers

Content Management

J2EE Application Servers

Imaging / Document Servers

Database / Data Warehouse Servers

Traditional Continuity

A typical PROD / CONTINUITY deployment:

- 96 total computers
- 134 CPUs
- 1232 Cores
- 120 TB SAN storage

Total cost over 10 years = 80.1M

Premise Based Production

Premise Based Continuity

Cloud Enabled Continuity

A typical PROD / CONTINUITY deployment:

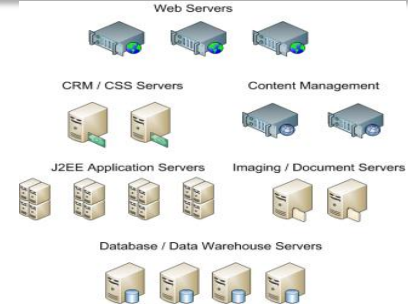- 96 total computers

- 134 CPUs

- 1232 Cores

- 120 TB SAN storage

With the CONTINUITY in the Cloud:

- 8 Million reduction in Upfront Costs

- 12 Million reduction in Continuing Costs

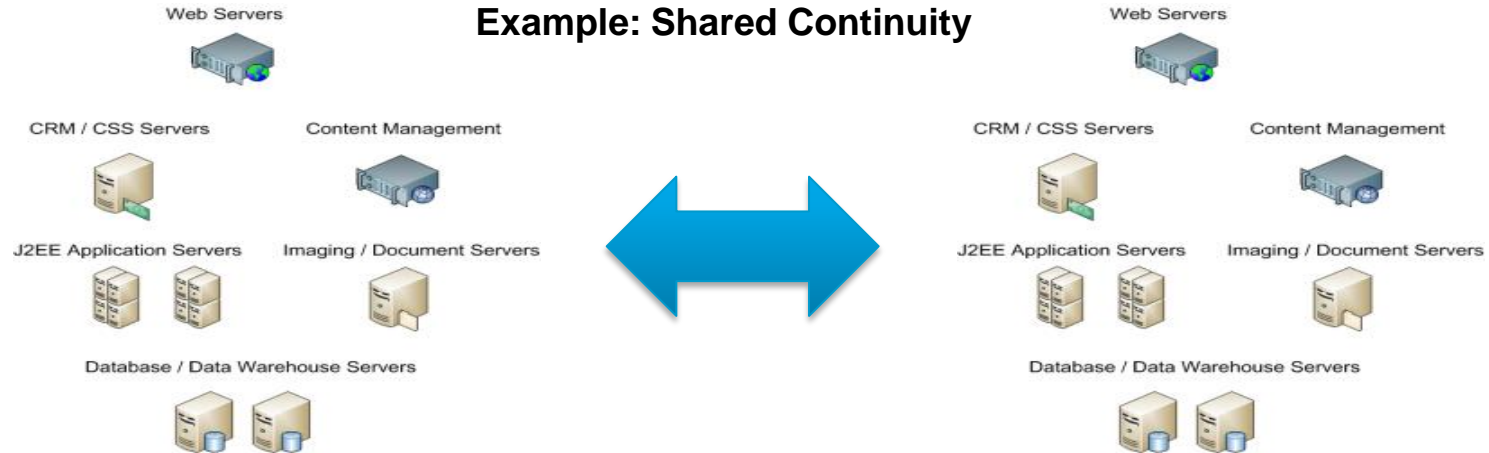**Total cost over 10 years = 60.1M**

Reducing Costs by 25%
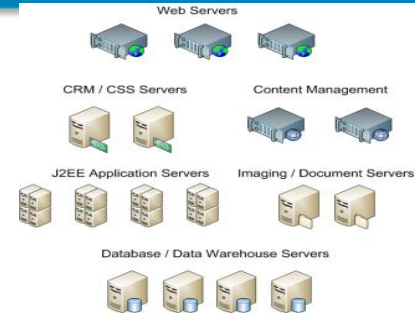
Additional Scenarios

Other Scenarios provide even more cost reduction:

- Premise Production – Cloud Continuity

- Premise Production – Cloud Production (Shared Continuity)

- Premise Production – Dynamic Cloud Capacity for Continuity or Surge

Example: Shared Continuity

People matter, results count.

Sean Rhody
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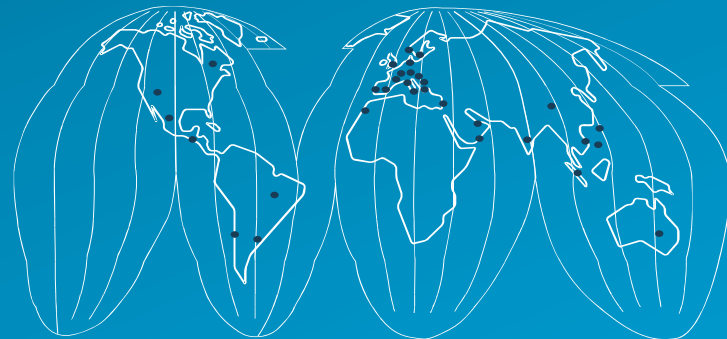
People matter, results count.

About Capgemini

With around 120,000 people in 40 countries, Capgemini is one of the world's foremost providers of consulting, technology and outsourcing services. The Group reported 2011 global revenues of EUR 9.7 billion (approximately $13.5 billion USD).

Together with its clients, Capgemini creates and delivers business and technology solutions that fit their needs and drive the results they want. A deeply multicultural organization, Capgemini has developed its own way of working, the Collaborative Business Experience™, and draws on Rightshore®, its worldwide delivery model.

Rightshore® is a trademark belonging to Capgemini

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