Cloud Services Measurement Initiative Consortium (CSMIC) Overview

November 2011

Consortium Objectives

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- Contribute to the solution of the cloud-based service measurement problem as determined by the consortium members
- Develop a Service Measurement Index (SMI)
  - A framework for organizing and classifying service measures
  - A standard way of describing and documenting service measures

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Service Measurement Index

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- A method for calculating the performance and quality of cloud-based services
- Will enable users to either compare cloud-based services against each other or to track a specific service's performance over time
- Will use a consistent and publically available framework of service attributes/characteristics
- Enables calculations where the relative importance of Cost, Accountability, Agility, Security and privacy, etc. will be determined by those using the SMI
- Will provide an objective basis for those moving to cloud services to determine how useful/appropriate a specific service is, given their requirements
- See this URL for updates: http://www.cloudcommons.com/ and select "About SMI"

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Consortium Work - 1

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Major tasks and products

- Develop and publish a Cloud Services Measurement Framework
- Determine metrics and measures for major cloud-based services
  - make available via website
- Collect data and feedback from the global B-to-B user community to improve/refine the measurement materials and move toward development of standards (ISO or other)
- Foster development of tools and other resources to support objective measurement of cloud services – promote use of the CSMIC material by industry, government, and academic adopters
- Inform the community about status updates via the website, blogs, and presentations at key conferences

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Consortium Work - 2

- Carnegie Mellon directors:
  - recruit members,
  - provide overall management and coordination, and
  - contribute to the technical effort
- Consortium members:
  - provide practitioners and researchers to work on the framework and measures
- Others get involved by:
  - Agreeing to be interviewed
  - Providing measures and data
  - Reviewing consortium work products
  - Agreeing to implement and test consortium defined measures

Current CSMIC Membership

- Accenture
- CA Technologies
- Carnegie Mellon University
- Cask LLC
- City University London
- Data Security Council of India (DSCI)
- International Association of Outsourcing Professionals (IAOP)
- KPMG
- Mycroft
- Stony Brook University, New York
- TM Forum
- TPI
- University of Melbourne, Australia

Status of the SMI effort

- The SMI is currently envisioned as a hierarchical framework. The top level divides the measurement space into 7 Categories.
  - Each Category is further refined by 3 or more Attributes.
  - Then within each Attribute a set of Key Performance Indicators (KPI's) will be defined that describe the data to be collected for each measure/metric.
  - Some of these KPI's will be service specific while others will apply to all services.
- The first public review version of the CSMIC SMI contains only the first 2 levels of this hierarchy, the Categories and Attributes.
- It is publicly available at www.cloudcommons.com

The 7 top-level Categories of the current CSMIC SMI

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	Category	Questions
1.	Financial	How much is it?
2.	Agility	Can it be changed and how quickly can it be changed?
3.	Assurance	How likely is it that the service will work as expected?
4.	Accountability	Can we count on the provider organization?
5.	Security and Privacy	Is the service safe and privacy protected?
6.	Usability	Is it easy to learn and to use?
7.	Performance	Does it do what we need?

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The Financial Category Attributes

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Attribute
Acquisition & transition cost
On-going cost
Profit or cost sharing

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The Agility Category Attributes

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Attribute
Adaptability
Capacity
Elasticity
Extensibility
Flexibility
Portability
Scalability

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The Agility Category Attributes

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Attribute
Adaptability
Capacity
Elasticity
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Flexibility
Portability
Scalability

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The Assurance Category Attributes

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Attribute
Availability
Data geographic/political
Maintainability
Recoverability
Reliability
Resiliency/fault tolerance
Service stability
Serviceability

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The Accountability Category Attributes

Attribute
Auditability
Compliance
Contracting experience
Data ownership
Ease of doing business
Governance
Ownership

Attribute
Provider business stability
Provider certifications
Provider contract/SLA verification
Provider ethicality
Provider personnel requirements
Provider supply chain
Security capabilities
Sustainability

The Security and Privacy Category Attributes

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Attribute
Access control & privilege management
Data geographic/political
Data integrity
Data privacy & data loss
Physical & environmental security
Proactive threat & vulnerability management
Retention/disposition

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The Usability Category Attributes

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Attribute
Accessibility
Client personnel requirements
Installability
Learnability
Operability
Suitability
Transparency

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The Performance Category Attributes

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Attribute
Accuracy
Functionality
Interoperability
Service response time

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How can your organizations be involved in CSMIC?

- Become CSMIC members
- Participate in public reviews
- Contribute suggested KPI's
- Agree to test the SMI when available
- Develop tools, training, and uses for SMI

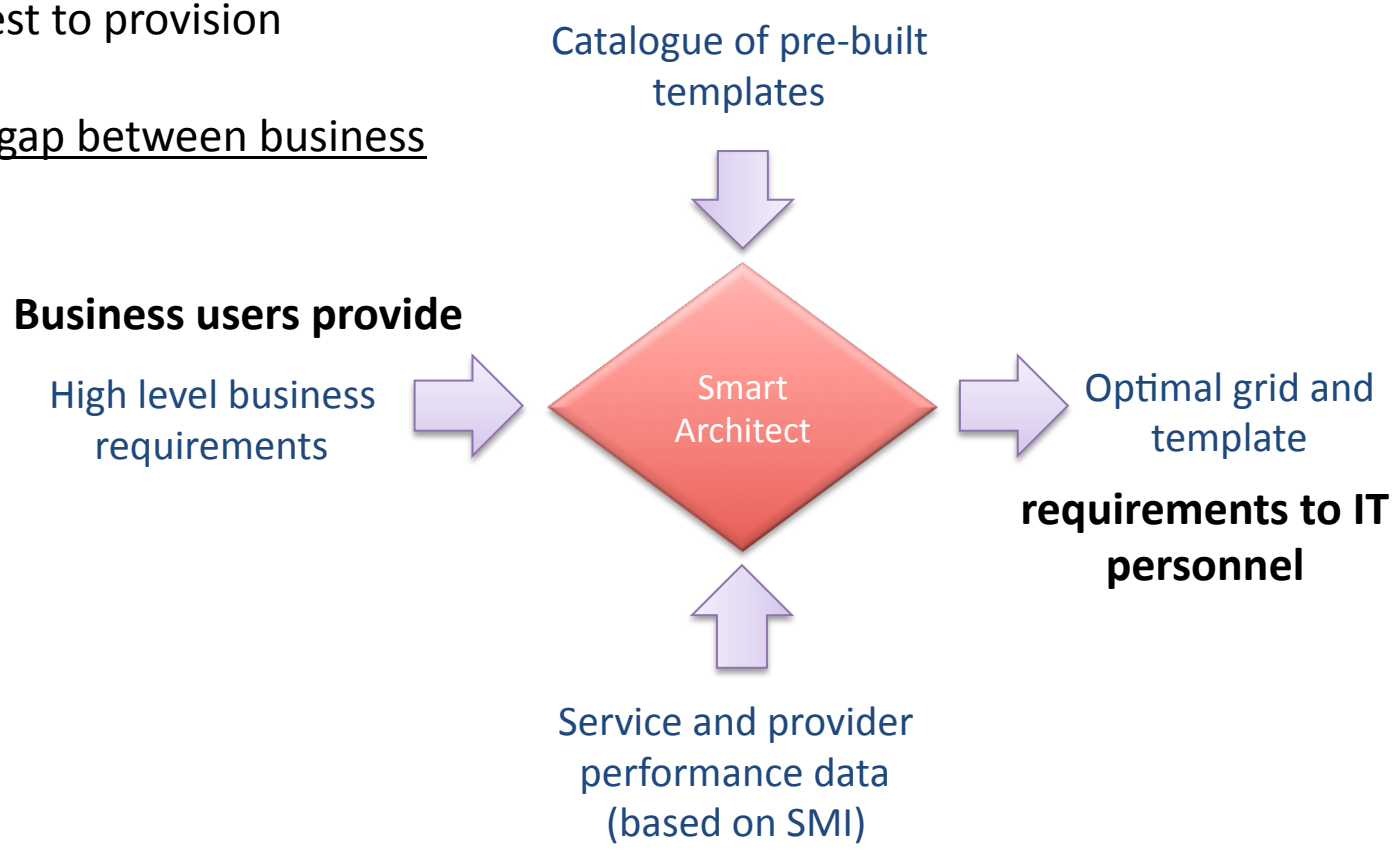
SMI-Based Tools

- The SMI will be (is) freely available for use in tools
- We expect there will be a selection of tools available that make use of the SMI
- CSMIC itself does not currently plan on developing tools
- We are aware of some current plans/tools being developed by CSMIC member organizations

Heimdall is a self-service portal designed to allow non-technical users request and provision applications on the cloud

Heimdall utilizes a Smart Architect component to decide what best application template to use and where it is best to provision

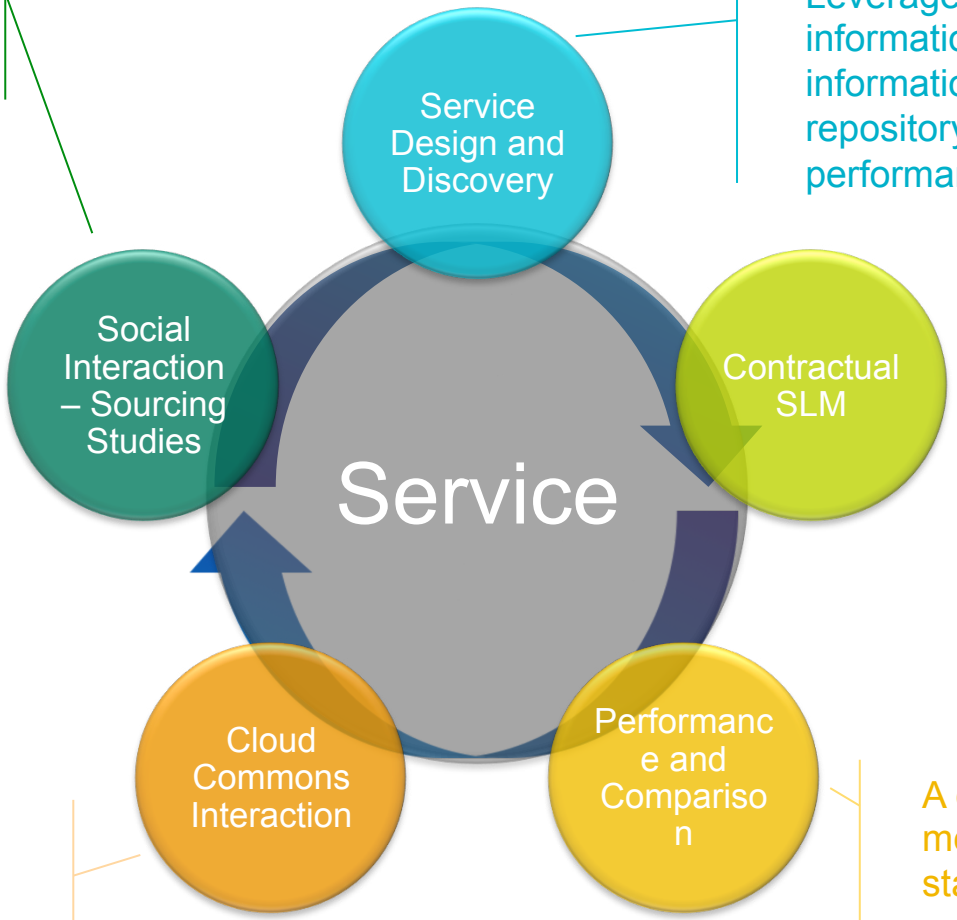
Heimdall bridges the gap between business and IT



CA Business Service Insight Overview

…with CA Business Service Insight, the service is at the center

Research potential areas of interest, leverage "experts" and gather new data.



Leverages existing service information to populate service information and create a single repository for service performance.

Enables automated management of performance for underpinning contracts, operational level agreements and service level agreements

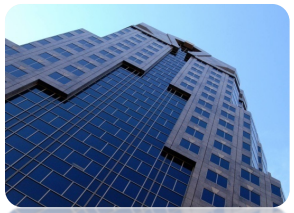
Interaction with Cloud Commons enables companies to benchmark performance with similar organizations to identify potential areas for improvement.

A company is able to measure performance using standard 'indices' and compare this performance internally and externally.

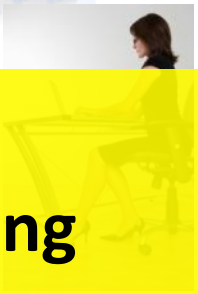
Why Business Service Insight – the World is a Dynamic Place

Compared our services with other companies and those from the Service Providers

The Service Providers



The Enterprise



Service Measurement Index Scoring

The User Community

Measure internal & external Services in a like-for-like, normalised way

ca technologies

About Carnegie Mellon Silicon Valley

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Dedicated to educating its students to become leaders in global technology, innovation, management and to performing innovative research that connects it to local, national and global high-tech companies.

Carnegie Mellon and the College of Engineering have established a natural extension in Silicon Valley, one that integrates the rich heritage and resources of the Pittsburgh campus with the opportunities available in the highly innovative and entrepreneurial Silicon Valley.

Offering graduate programs in software engineering, software management, information technology, innovation and mobility, each program provides the appropriate mix of technical, business and organization skills critical to our students' success.

With research that focuses on a suite of new technologies Carnegie Mellon Silicon Valley is committed to creating and implementing solutions for real problems.

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http://www.cloudcommons.com