Researching Future Networking
PRP workshop CallIT2 10/16/15

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Researching Innovations: Framework

**Context:** Flexible Hosting, Scaling Agile, Product Teams, Pace Layering, Hybrid Cloud, Pro-activeness, Operational Excellence, Security, Governance, e-Healthcare

**Innovations**
- Future Networking Concepts
- Service Provider Group Concepts
- Autonomous Response Cyber-Security Concepts
- Open Infrastructure Architecture Methodology

**Sourcing Track**

**Technology Track**

**Security Track**

**Architecture Methodology Track**

**Others Track**

**R&D**

**Validation Roadmap**

**Value contribution**
- System (e.g., an Aircraft)
- Enterprise (AF/KL Web Infra)
- Municipal (Smart Cities)
- Regional (Science DMZ)
- Global (GENI)

**Scale**
GENI: Terms and Definitions

- **A slice**: One or more resources provided by an aggregate
  - E.g. Bare machines, virtual machines, VLANs

  **What does my mean?**

  *My slice contains slivers from many aggregates.*
Researching Innovations

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R&D:
- Security Track
- Technology Track
- Architecture Methodology Track
- Sourcing Track
- Others Track

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Validation
Validation Roadmap
OIAm: A functional architecture specification method

Generic

Specific

Functional Design

OIAM Patterns: OIAr (Community supplied)

SPG Infrastructure Domain Patterns

Technical Design

SPG compliant infrastructure patterns

SPG Solution Design

Realization

SPG Standard Stacks & Components

Running Infrastructure CI’s & CMDB
Envisaged workflow – Automated implementation.

- Requirements
- Provider Solution Design Pattern Library based on SPG Archetypes
- OIAr Community Repository
- SPG Slice Archetype Library
- Infra Design
  - Documentation Generation
  - slice RSPEC Generation
  - Aggregate Manager
  - Running Infrastructure
- Automated Deployment Process
- CMDB

Architecture Design Tool
Selection & Specification
Provider Technical Level
SGP Functional Level