

Certification: How to get a better Certification Process

Lance Sherry
George Mason University
I CNS Conference 2004

Participants:

- Sponsor: Bob Kerczewski (NASA, GRC)
- Chair: Lance Sherry
(George Mason University)
- Co-Chair: Leonard Schuchman
(Satel. LLC)
- Scribe: Gregory Jones (CNS)
- Please sign participants list

Proposed Working Group Meeting Plan

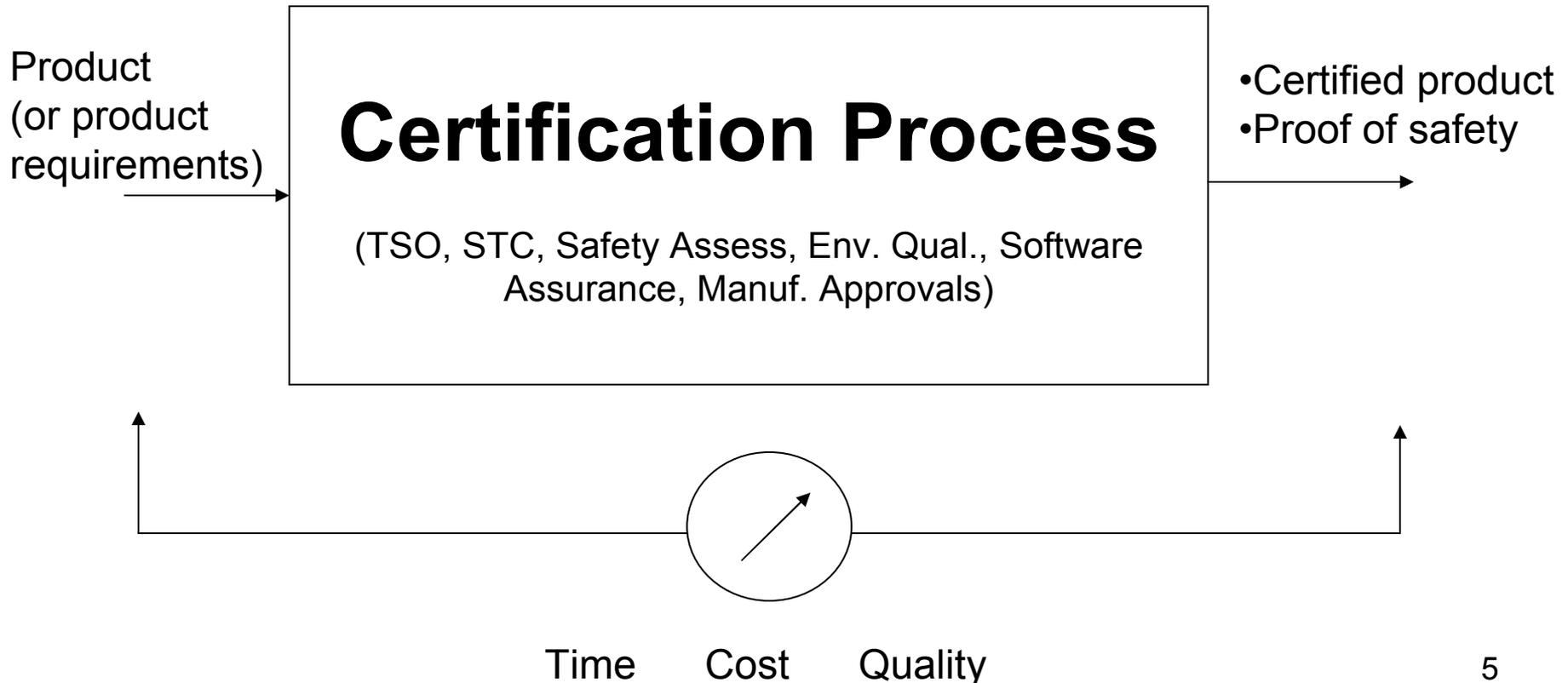
- ~~Welcome~~
- ~~Introductions~~
- Goals and Approach - Sherry
- Drivers of Certification Process – Shuchman
- Open Floor Discussion
- Brainstorm Requirements
- Brainstorm Candidate Technologies

Goal:

- Identify candidate research topics to minimize certification as a...
 - “risk to the commercialization of CNS technologies”
 - Reduce Time
 - Reduce Cost
 - Maintain appropriate level of quality

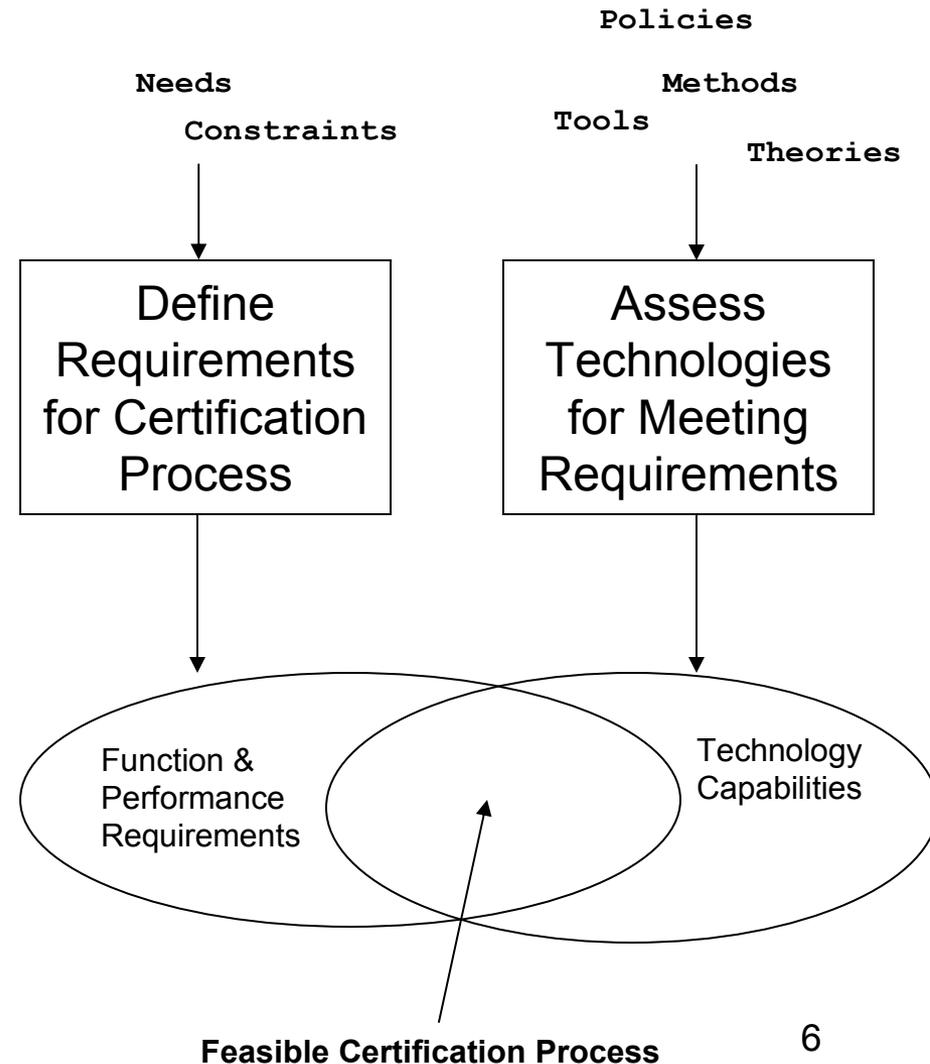
Approach to Identify R&D

- Treat Certification as a process:

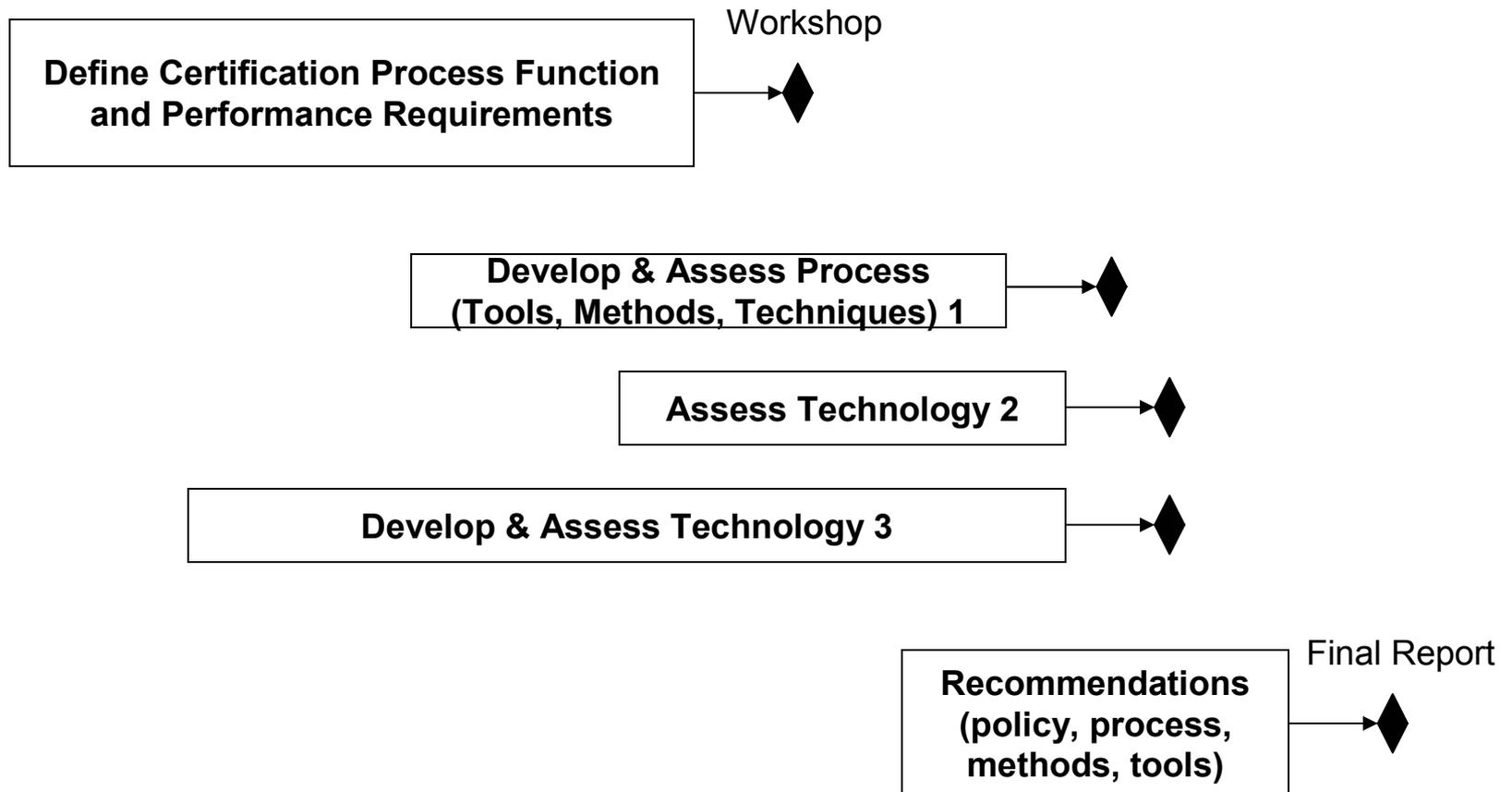


Approach to Identify R&D

- Process
 1. Identify Functional and Performance Requirements to satisfy Needs and Constraints
 2. Assess Technologies for meeting Requirements
- Feasible Certification Process is overlap between requirements and technology capabilities



Form of R&D Plan



Function Requirements

- Document a regulatory judgement that a device meets all applicable regulatory requirements and can be manufactured properly
- Provide credible prediction of future service experience for new devices

Performance Requirements

- Collect historic data
 - Cost of avionics (e.g. comm) over time
 - Comparison cost of certified vs. non-certified products
- Identify Metrics
 - Ratio Price/Development Costs