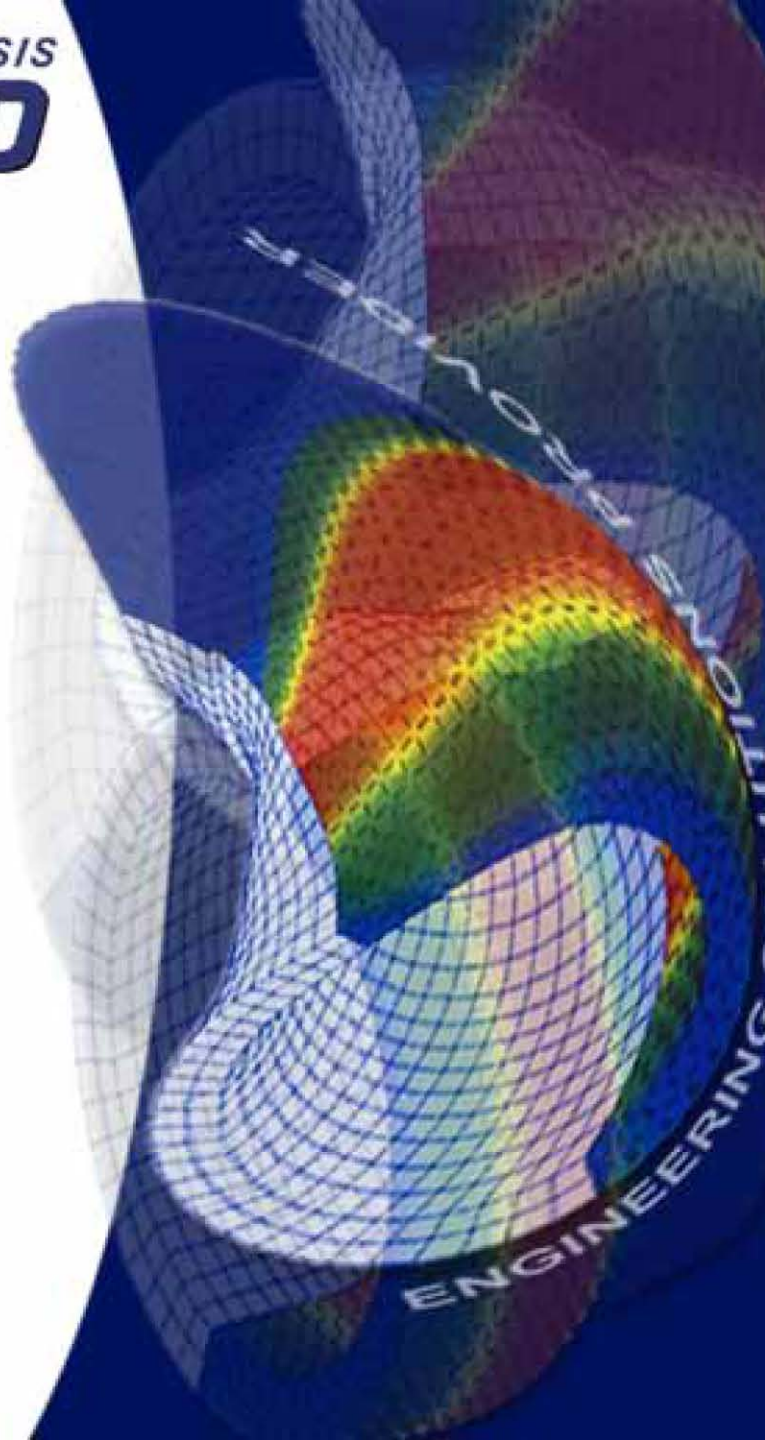
ENGINEERING SCIENCE ANALYSIS
MANUFACTURING & DESIGN MD

AZ Supply Chain

Small Company Perspective



Overview

- Supply Chain – Standard Definition
- Supply Chain – Small Business Development View
- Small Business – Example & Challenges
- Enhancement / Improvement - Possible Steps

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Supply Chain

- Mostly considered for manufacturing / product assembly operations

- Suppliers in lock-step with Prime

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Supply Chain

- Movement of materials - Flow from source to the end customer
  - Purchasing, manufacturing, warehousing, transportation, customer service, demand planning , supply planning and Supply Chain management.

  - Made up of people, activities, information and resources involved in moving a product from it's supplier to customer.

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Supply Chain – Small Biz

- Product Development Supply Chain – e.g. SQUID
- AKA "Steps for bringing R&D Dollars into AZ"
  - Determining agency needs – "Phase 0"
  - Idea – AZ Fast Grant
  - Funding – SBIR Phase I, II
  - Teaming Partners
    - Industry, Universities
  - Prototype - Suppliers
    - Materials
    - Manufacturing
  - Test Facilities - Labs
  - Commercialization avenues – VC, Licensing, etc.

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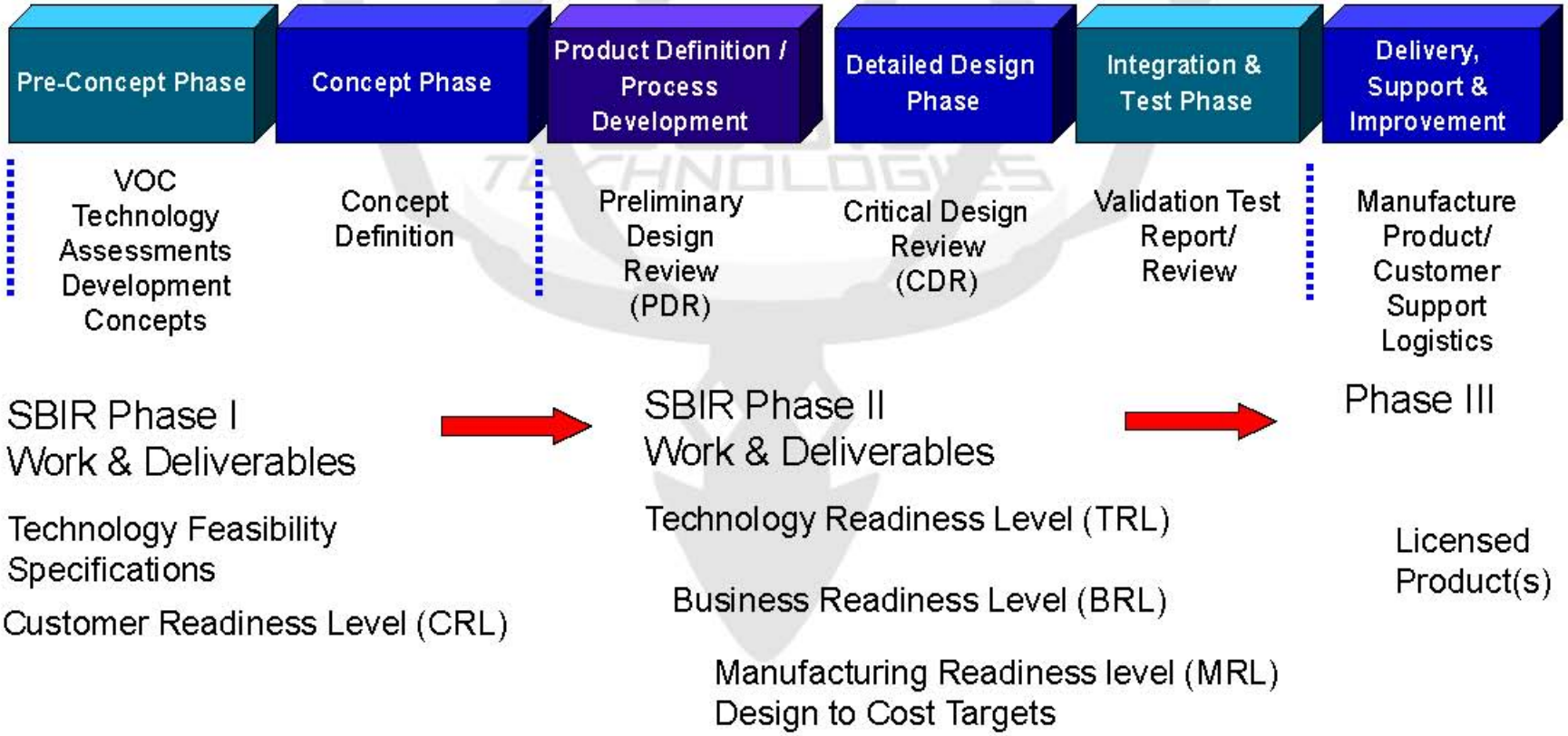
Product Development (Example) - IPDS

- Multi-lateral product development process



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SQUID Development Supply Chain

- Industry Contacts & Partners

Homeland Security Advanced Research Projects Agency
SBIR PROGRAM

W. P. CAREY SCHOOL of BUSINESS

Sandia National Laboratories

Pacific Scientific

Dynamic Labs

ASU Technopolis

GS POLYMERS, INC.

ESA

TRIMBLE CONSULTING

Honeywell

AlliedSignal SPECTRA Performance Materials

Engineering & Fabrication, LLC.

MD HELICOPTERS

BOEING

Raytheon

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AZ Supply Chain Challenges

- R&D / Product Development Environment is dynamic
  - New product / technology developed
  - Must adapt / redevelop Supply Chain
- Fragmented information on AZ resources
  - Small Biz must rely on own developed (Rolodex) contacts
    - Industry AND University
  - If none, 'root around' to find contacts relevant to opportunity
    - Costs Time and $$$
  - Quickest Route - "Google - GOOS" - Go Out Of State
    - Select Company / University on top of search list

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AZ Supply Chain

- Steps in the right Direction:
  - Inventory & classify AZ assets that make up chain
    - e.g. So AZ "Cluster"
    - Include R&D Institutions and Assistance centers
- Make readily available via web
- Maintain & Update

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Summary

- Small Business bringing R&D $$ to AZ performing Product Development utilize a dynamic Supply Chain
  - Involves many steps in the process – VOC help, Ideation help, proposal help
  - Involves many types of "Suppliers"
    - Industry / Subject experts / Universities / Teaming Partners
    - Materials
    - Manufacturing
    - Test Facilities – Labs
    - Commercialization avenues – VC, Licensing, etc.
- One-stop AZ resource website would streamline process and enhance chances of winning more $$

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