

# SBIR Commercialization

Panel Discussion  
AIAA Los Angeles Section- Enterprise Chapter  
IEEE/ECSC & OCEN

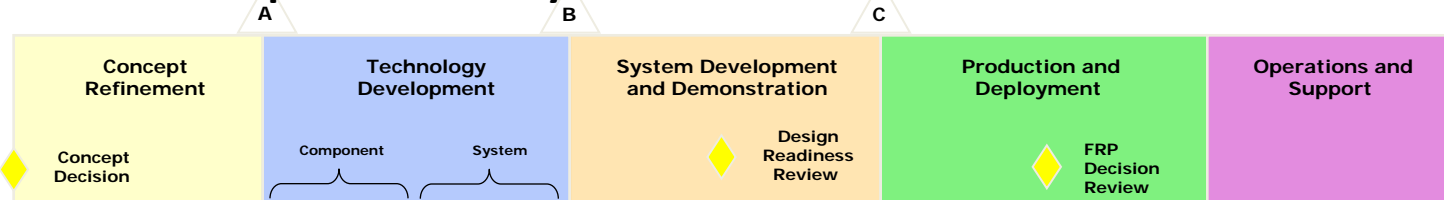
Knobbe-Martens  
Irvine, CA  
10 April 2010

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# DoD Technology Maturity & Procurement

## Defense Acquisition Life Cycle Framework



Innovation



Development

SBIR Ø 1

SBIR Ø 2

SBIR End Ø 3



DoD Process tends to Pull Technology

## Technology Readiness Levels

TRL 1	TRL 2	TRL 3	TRL 4	TRL 5	TRL 6	TRL 7	TRL 8	TRL 9
Basic Principles Observed	Concept Formulated	Proof of Concept	Breadboard in Lab	Breadboard in Rep Environment	Prototype in Rep Environment	Prototype in Ops Environment	System Qualification	Mission Proven

## Manufacturing Readiness Levels

Research	MRL 3 Manf. Concept Identified	MRL 4 Lab Environment	MRL 5 Relevant Environment	MRL 6 Production Representative Environment	MRL 7 Mature for LRIP	MRL 8 LRIP	MRL 9 FRP	MRL 10 Lean Production
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Sources:

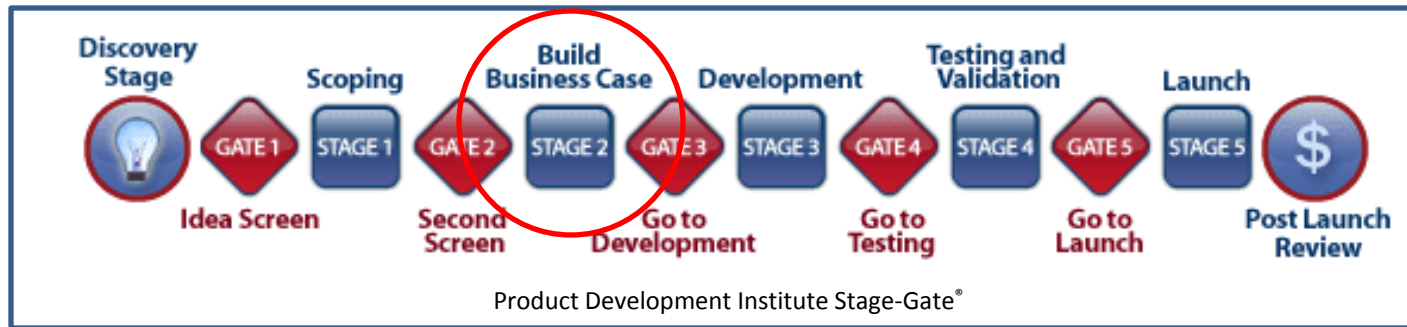
Best Manufacturing Practices Center of Excellence

[https://www.mrlassist.bmpcoe.org/.../MRL\\_Assist\\_charts\\_DMC\\_2006.ppt](https://www.mrlassist.bmpcoe.org/.../MRL_Assist_charts_DMC_2006.ppt)

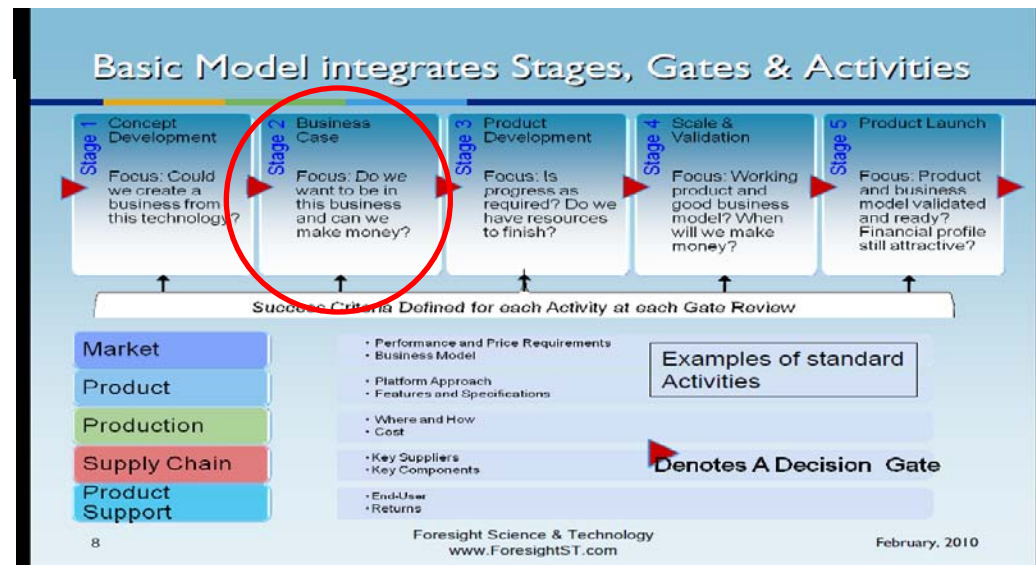
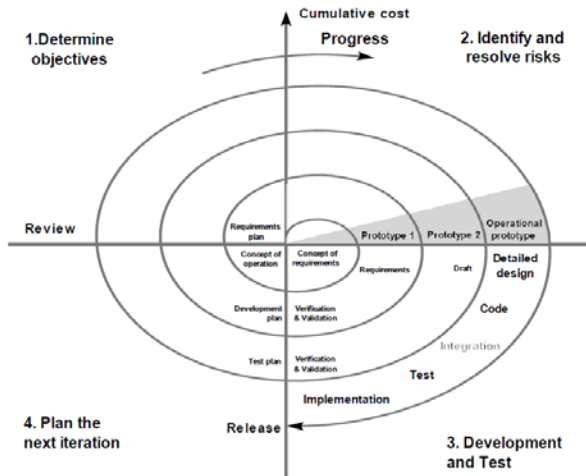
Dennis Wonica, SBIR Commercialization, AIAA LA-ES 3/18/2008



# Product Development Gates & S/W Spiral

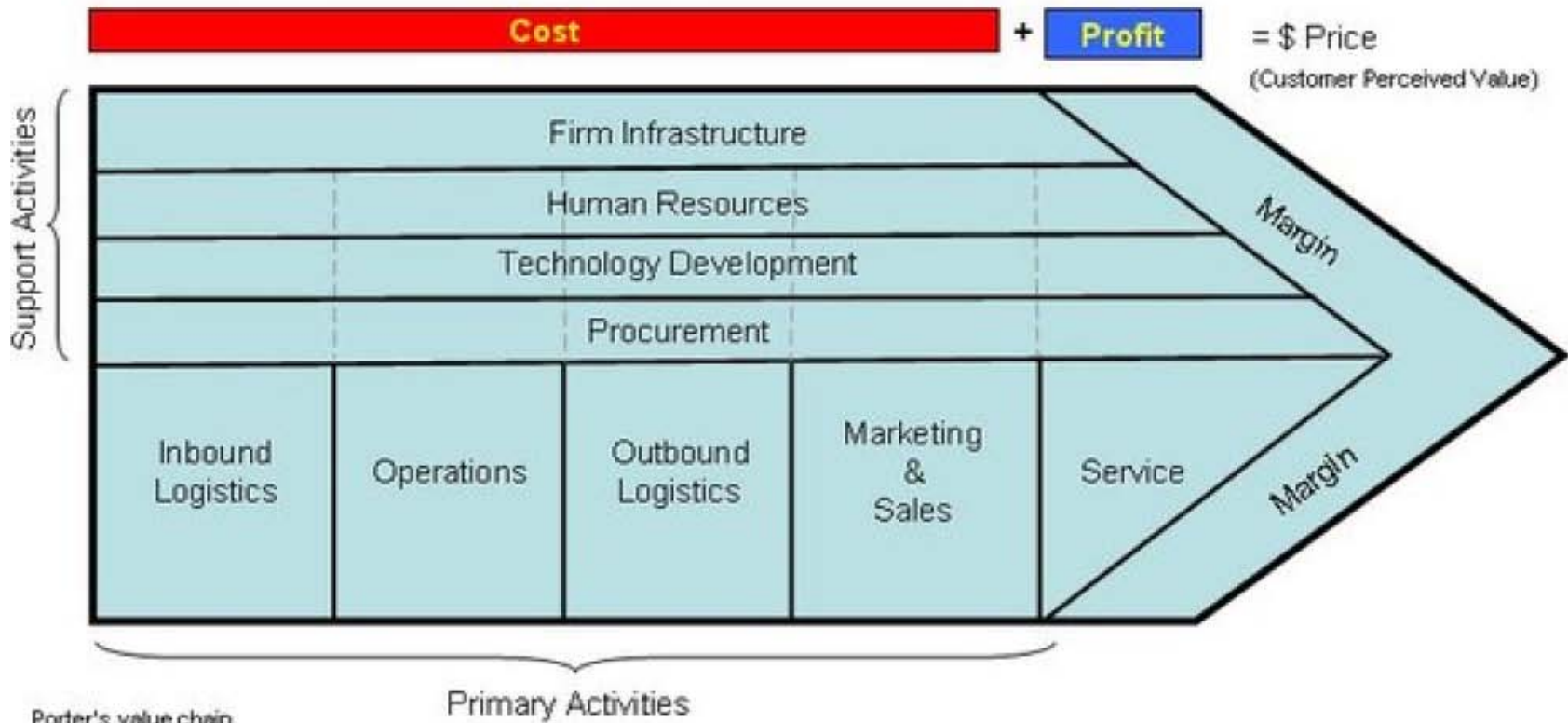


## Boehm S/W Development Spiral

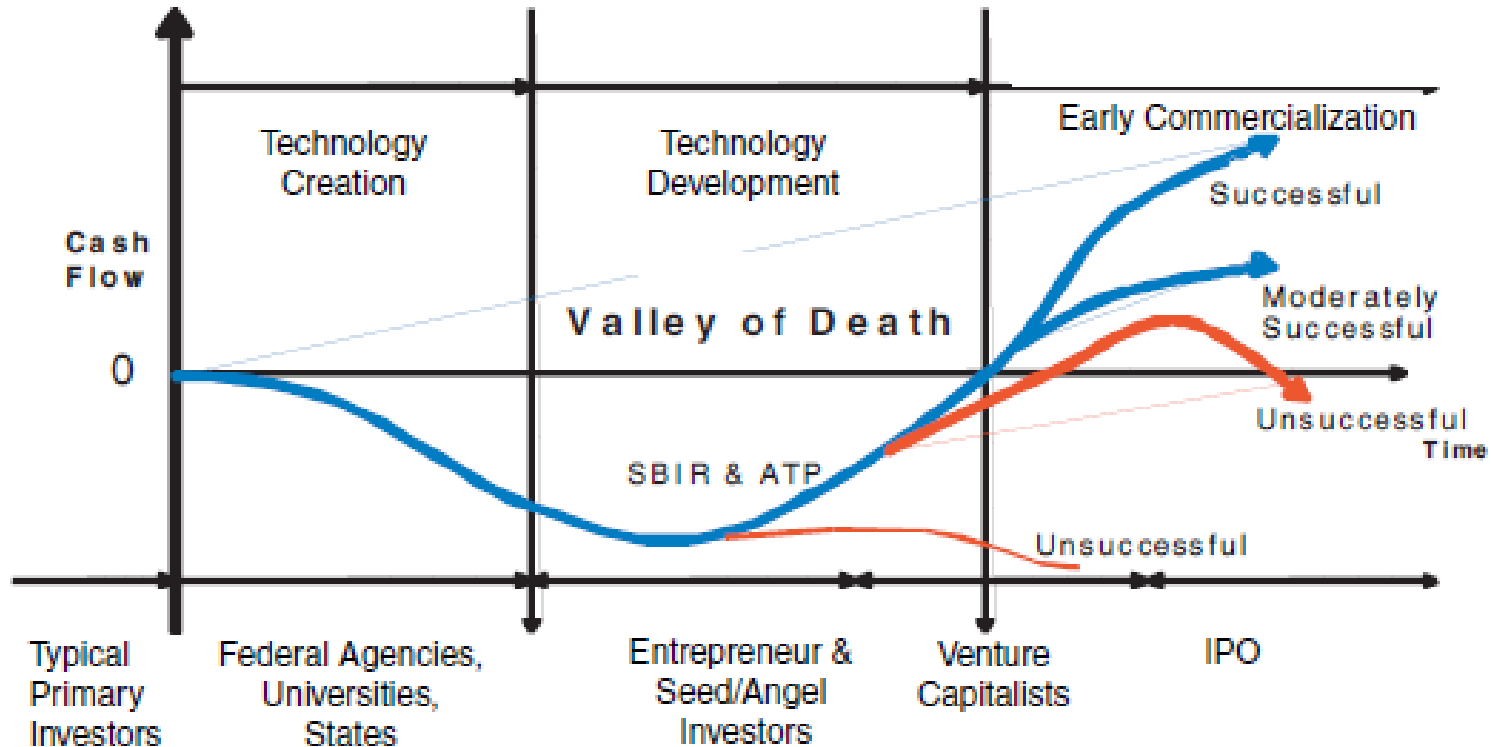


Commercial Processes tends to Push Technology

# Value Chain



# Valley of Death

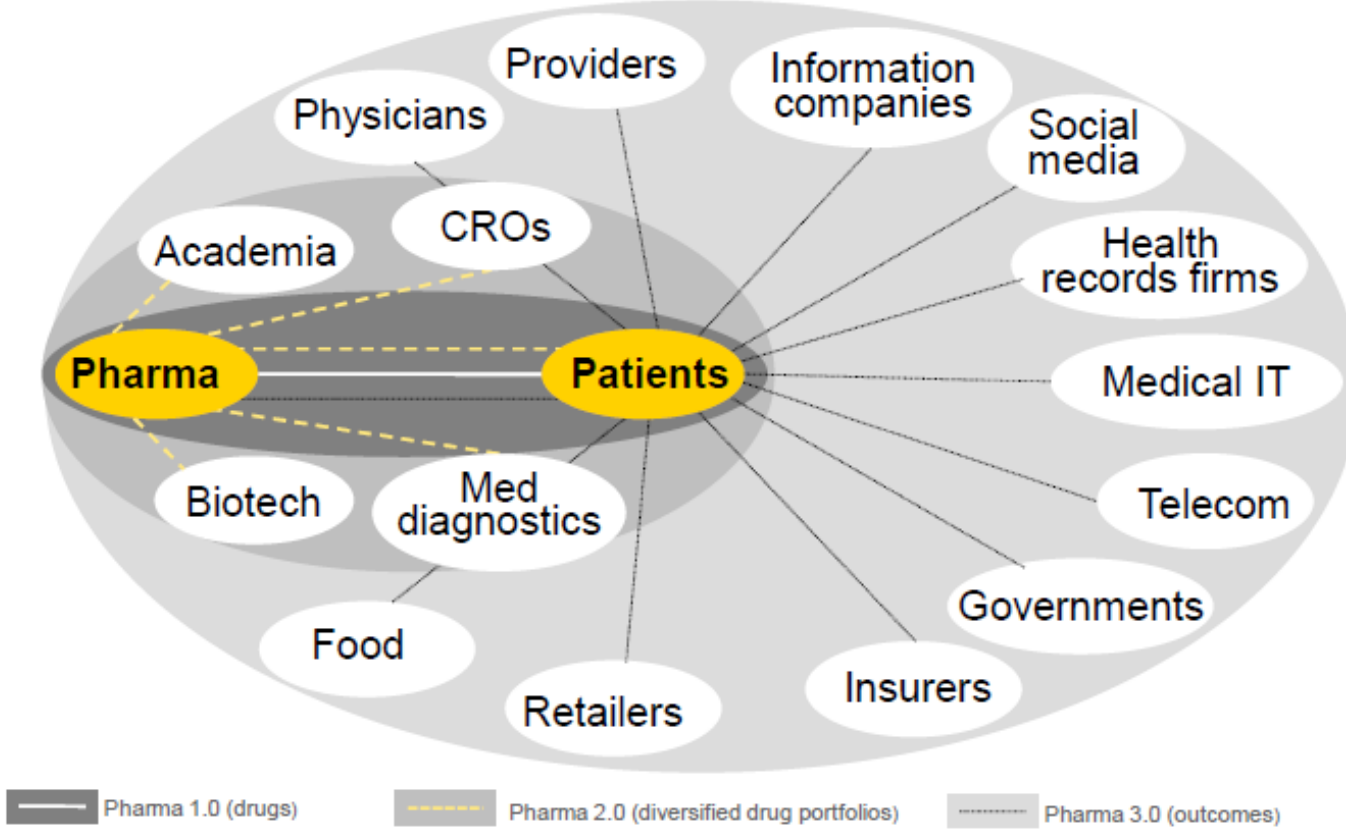


**FIGURE 1-3** The Valley of Death.

SOURCE: Adapted from L.M. Murphy and P. L. Edwards, *Bridging the Valley of Death—Transitioning from Public to Private Sector Financing*, Golden, CO: National Renewable Energy Laboratory, May 2003.

# Pharma 3.0

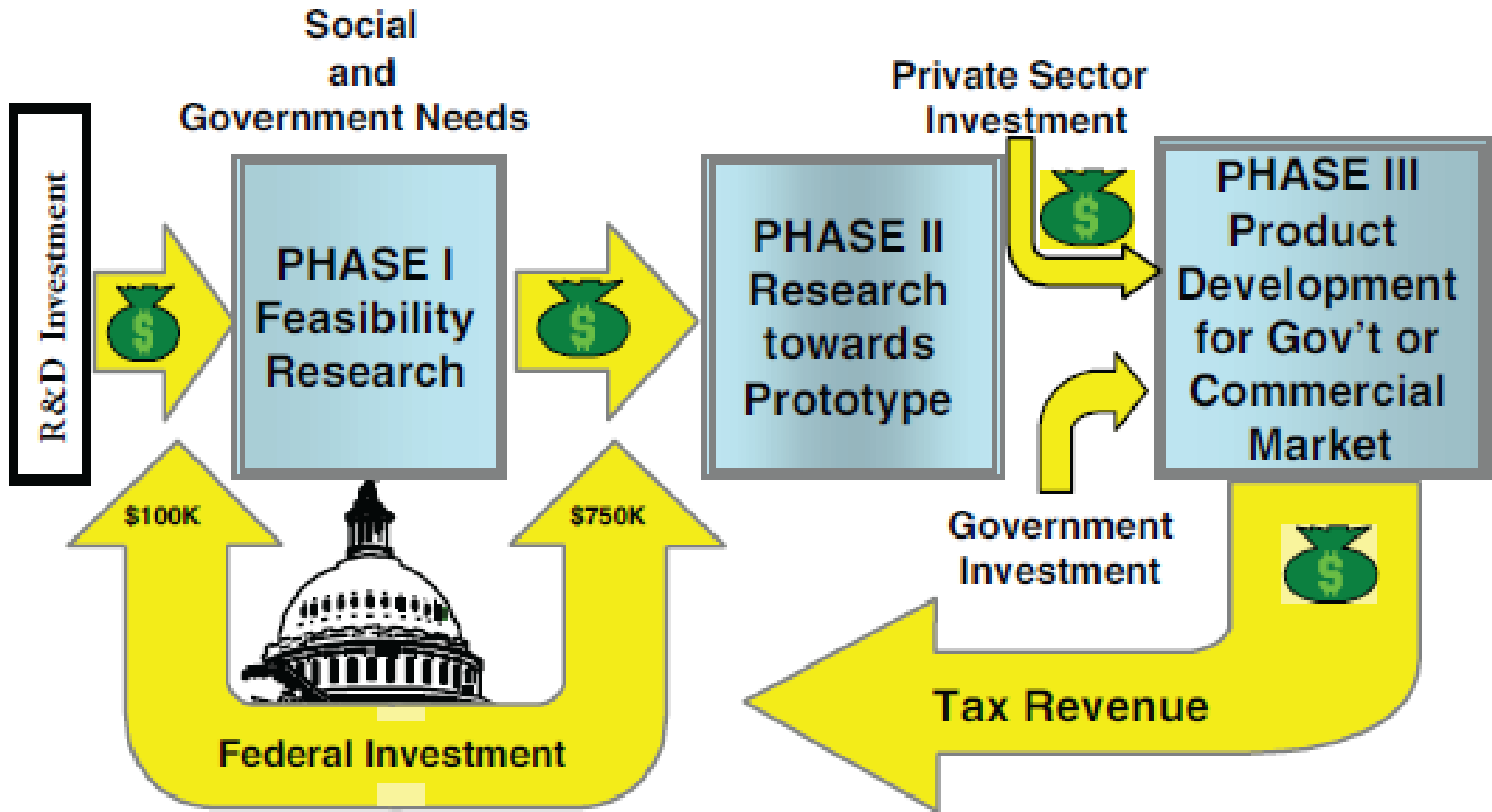
*The health outcomes ecosystem*



**ERNST & YOUNG**  
Quality In Everything We Do

Corporate ecosystems and innovations are becoming increasingly complex

# Structure of the SBIR Program



Source: An Assessment of the SBIR Program  
<http://www.nap.edu/catalog/11989.html>