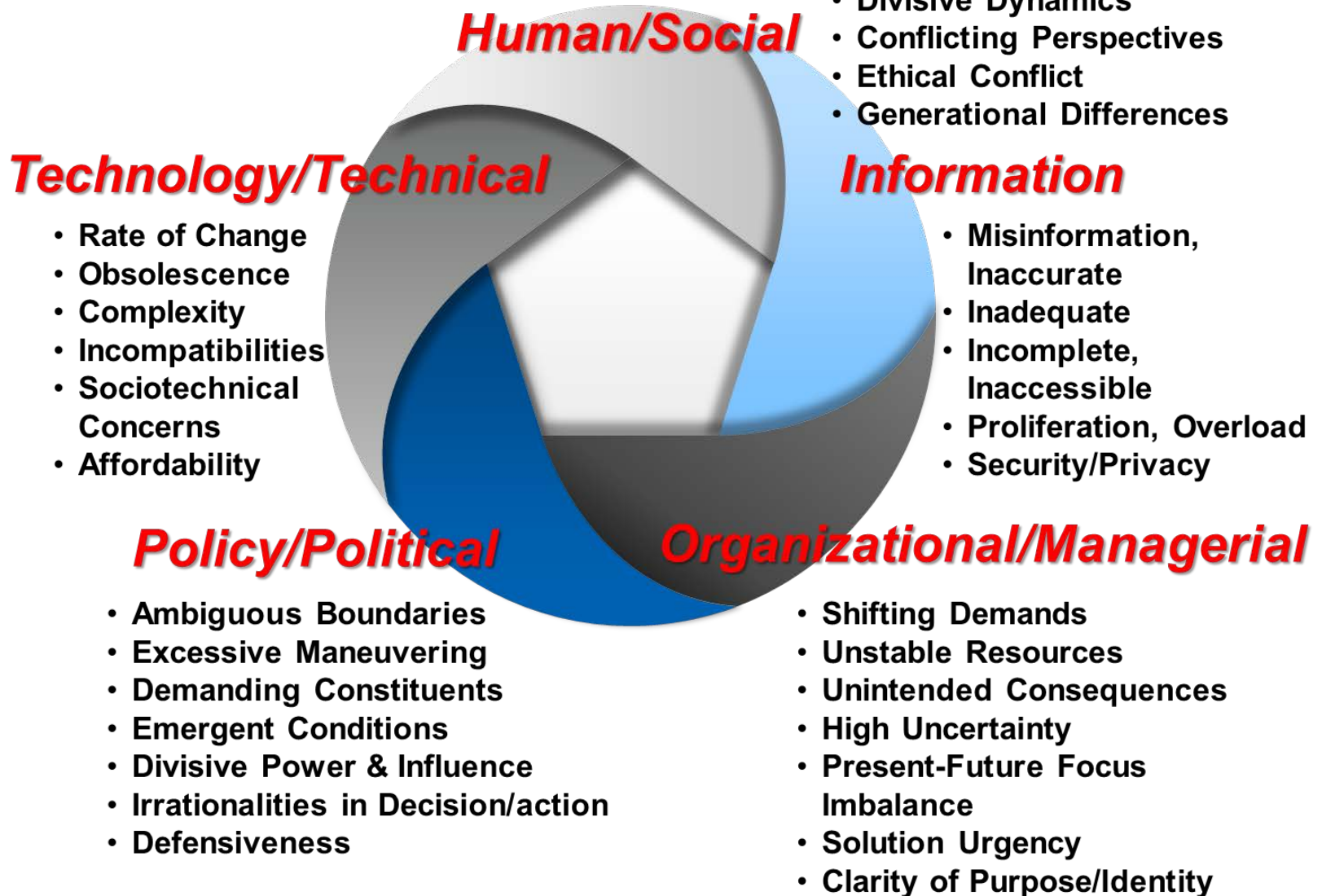


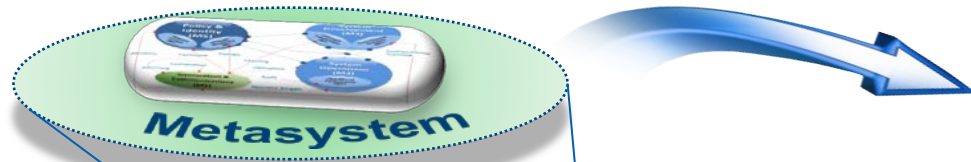
# Complex System Governance for Defense Acquisition

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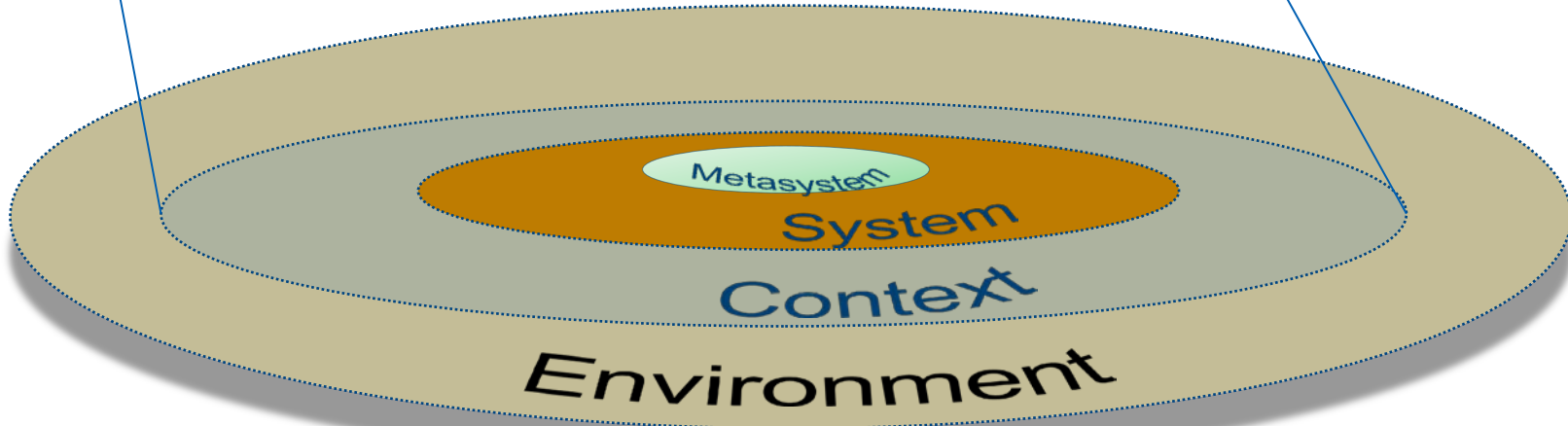
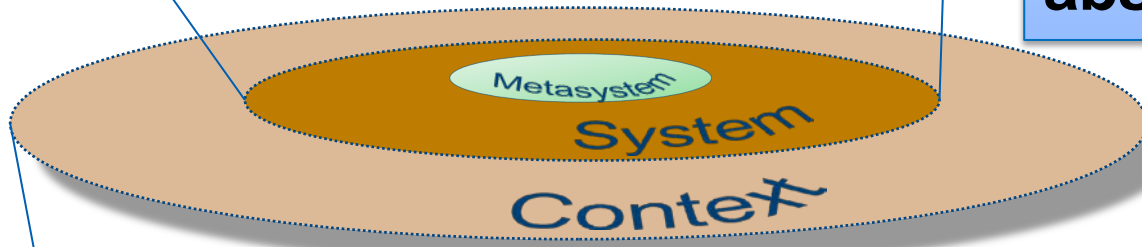
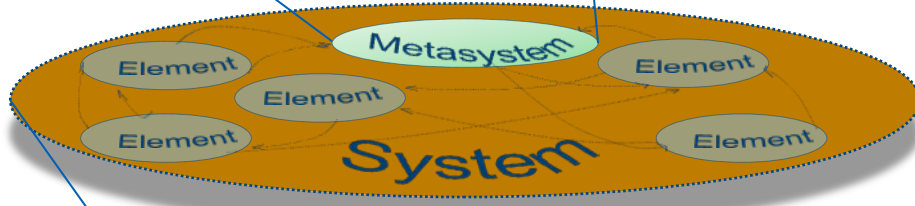


# Difficult conditions confront us

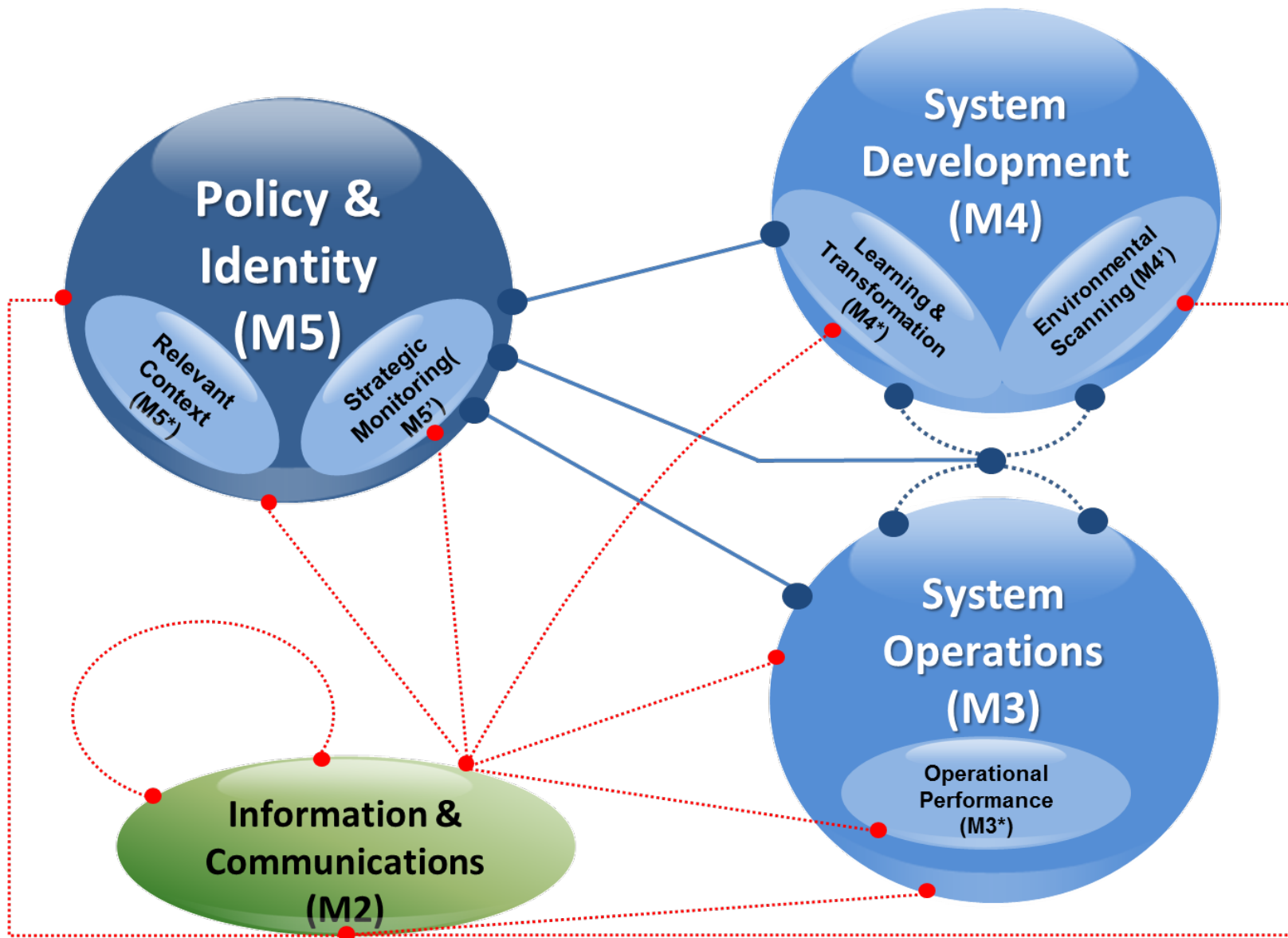




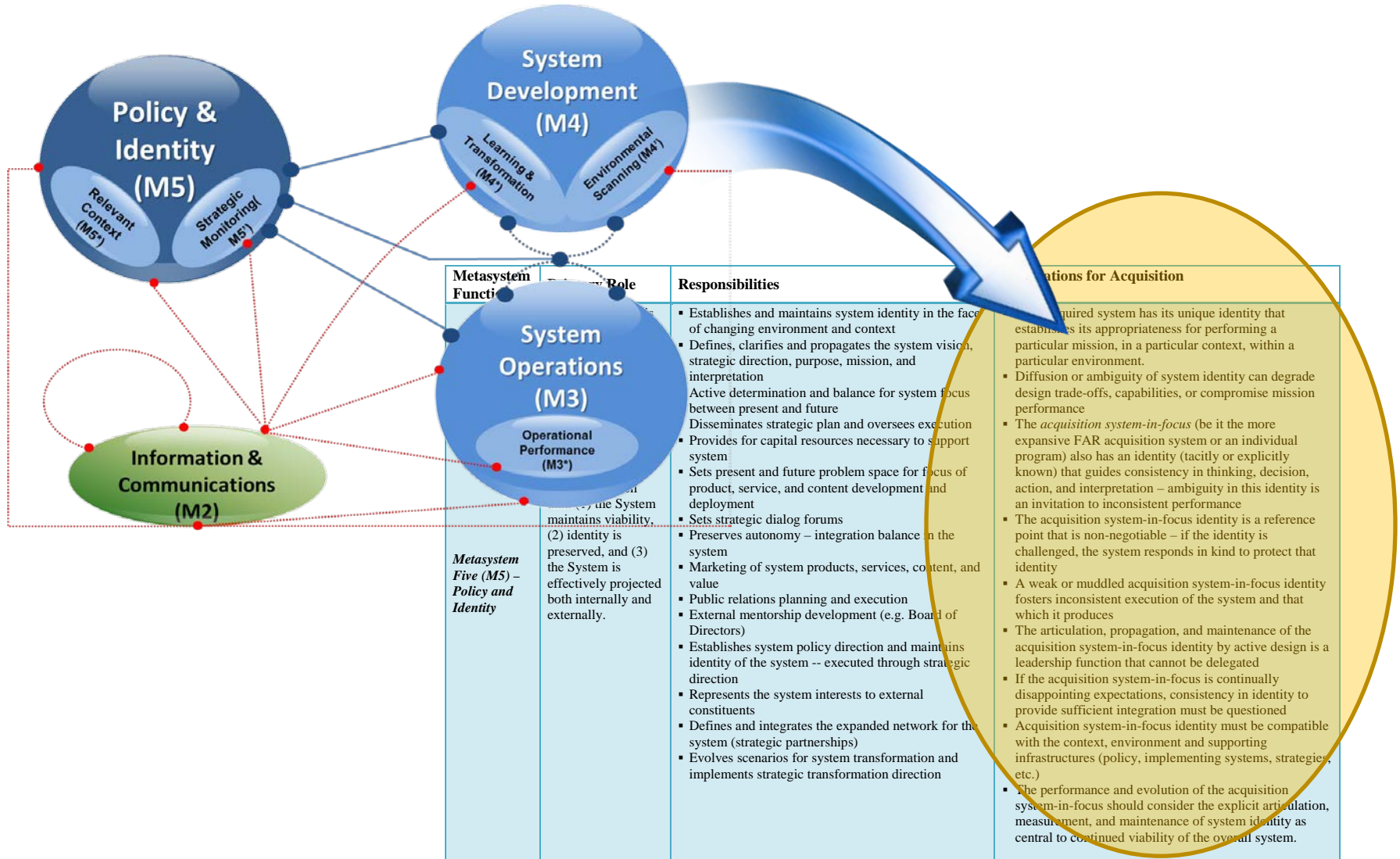
**Environment, context, system, and metasystem are inseparably interconnected. Separation is for convenience of analysis and always subject to abstraction error.**



# Nine Meta-functions provide System Governance



# The CSG Reference model applied to Defense Acquisition develops implications

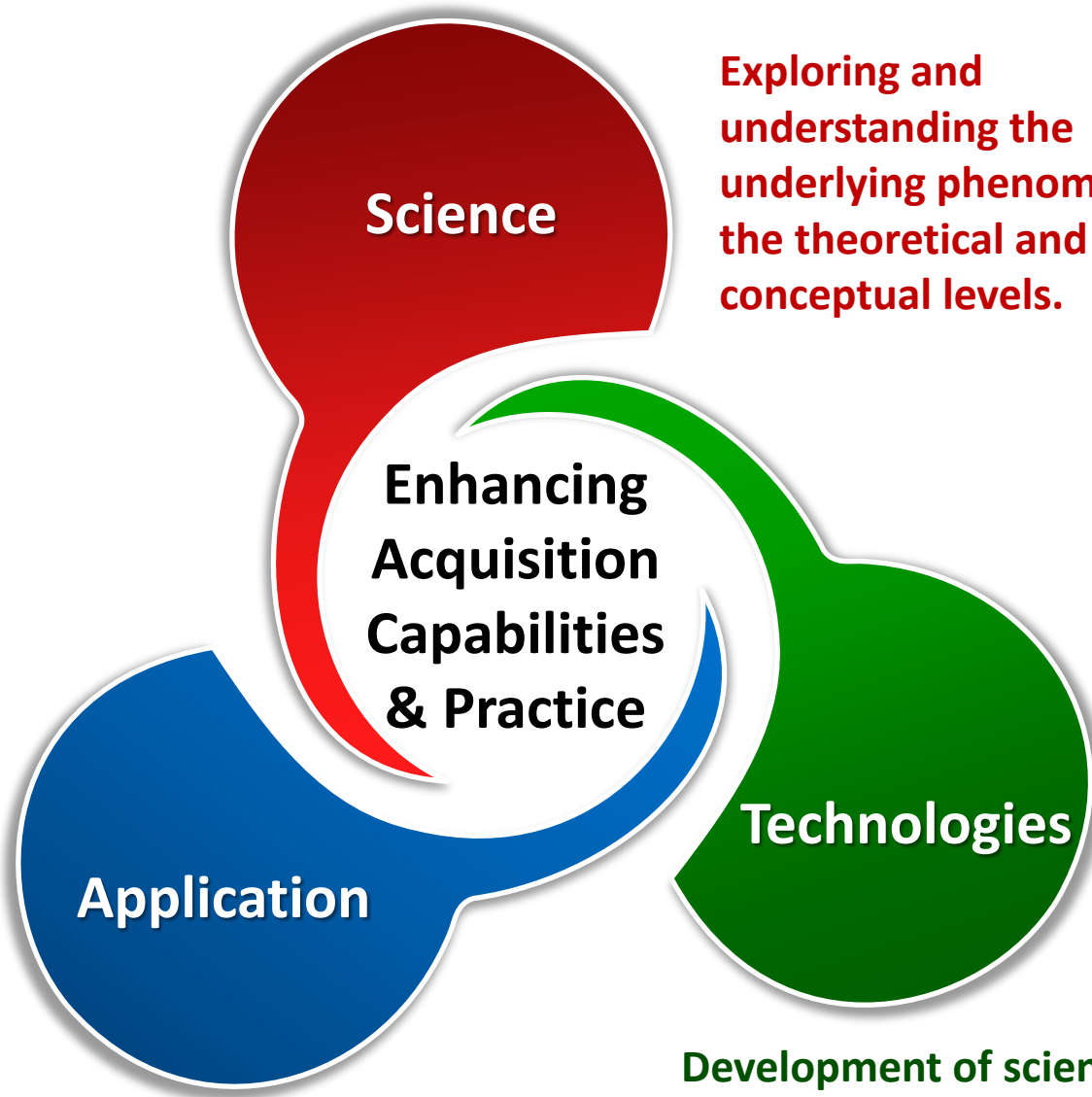


# Analysis of GAO documents

**Table 2: Analysis of troubled programs through the lens of CSG**

<b>DOD program/ Report Source</b>	<b>Does the problem/failure appear to be governance related?</b>	<b>Does the language in the report indicate a similar meaning for governance as the Complex System Governance?</b>	<b>Is there any concrete indication that CSG would have helped this program?</b>
<i>Zumwalt Class Destroyers (DDG1000) GAO-08-904 [1,2]</i>	Yes	No model/framework of governance – Milestone C suggested – won't help with alignment of perspectives or understanding decisions and actions (communication channel – dialog) among others	Yes – this initiative seems to lack clear vision/strategy. Report suggests that channels of communication are weak (p. 45 for example)
<i>Ford Class Aircraft Carrier (CVN78) GAO-16-847 [26]</i>	Yes	Yes, the report seems to identify many governance issues that can be mapped to metasystem functions within the CSG Reference Model	Yes – contextual assessment to evaluate acquisition culture. The ship is already built though, so now the asset needs to be protected and maintained.
<i>Total Asset Visibility (Air Force) GAO-08-866 [3, 27]</i>	Yes	Yes, especially the “transformation plans” demonstrating initiative to evolve meta-systemic functioning	Yes – systems thinking likely not present in development, poor coordination of unsuccessful program
<i>Major Automated Information Systems (MAIS) GAO-12-629 [25]</i>	Yes	Yes, GAO seems to have an idea of the metasystem governance expected of a complex system, as well as realistic expectations regarding scope	Yes – some metasystem functions are clearly missing or inadequate, ex. poor coordination and communication (25, p. 57,58)
<i>National Security Cutter (Coast Guard/Navy) GAO-16-148 [24]</i>	Yes	Yes, report seems to capture design/execution elements necessary for control/communication/coordination/integration (but possibly not sufficient?)	Yes – CSG embraces varying perspectives – the CG & Navy did not seem prepared align perspectives and have poor communications

Deployment of technology-based capabilities to enhance acquisition practice.



**Science**

Exploring and understanding the underlying phenomena at the theoretical and conceptual levels.

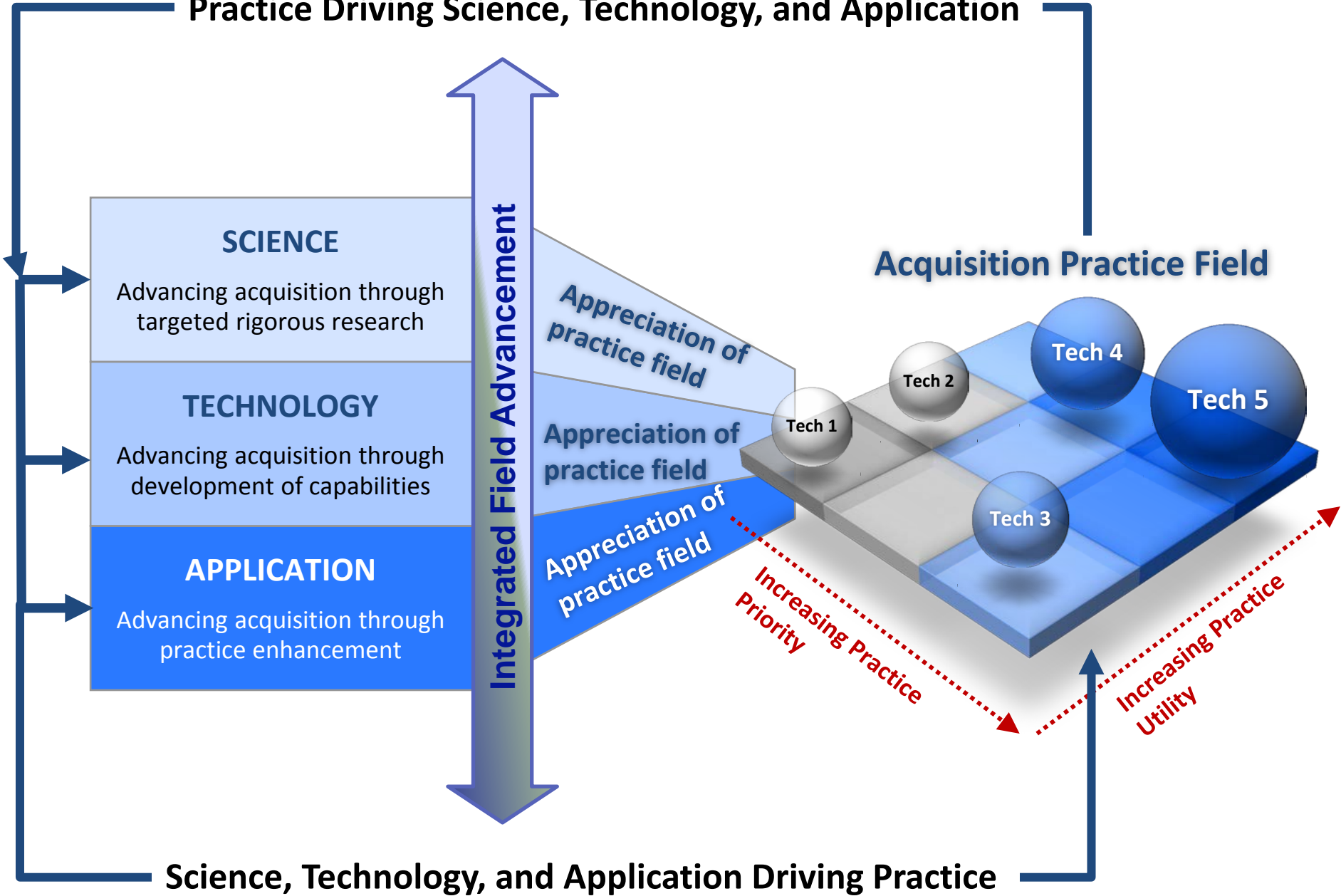
**Enhancing  
Acquisition  
Capabilities  
& Practice**

**Application**

**Technologies**

Development of science-based implements to support enhanced capabilities that promote improved practice.

**Practice Driving Science, Technology, and Application**



**SCIENCE**

Advancing acquisition through targeted rigorous research

**TECHNOLOGY**

Advancing acquisition through development of capabilities

**APPLICATION**

Advancing acquisition through practice enhancement

**Integrated Field Advancement**

*Appreciation of practice field*

*Appreciation of practice field*

*Appreciation of practice field*

**Acquisition Practice Field**

Tech 1

Tech 2

Tech 4

Tech 5

Tech 3

*Increasing Priority*

*Increasing Practice Utility*

**Science, Technology, and Application Driving Practice**



# Where do we go from here?



**01**

From CSG perspective, map the current state and pathologies in the acquisition governance system

**02**

Explore application of CSG system science for acquisition system governance

**03**

Identify existing and developmental acquisition technologies needed to address system pathologies

**04**

Preparation of applications of CSG technologies for deployment in the field

**05**

Engage the acquisition practice field to meter CSG developmental priorities across science, technology, and application thrusts

# Questions??

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