MicroSystems
Integration, Inc.

MicroSystems Integration, Inc.

Capabilities & Expertise

January 2016

MicroSystems Integration, Inc.

Who We Are

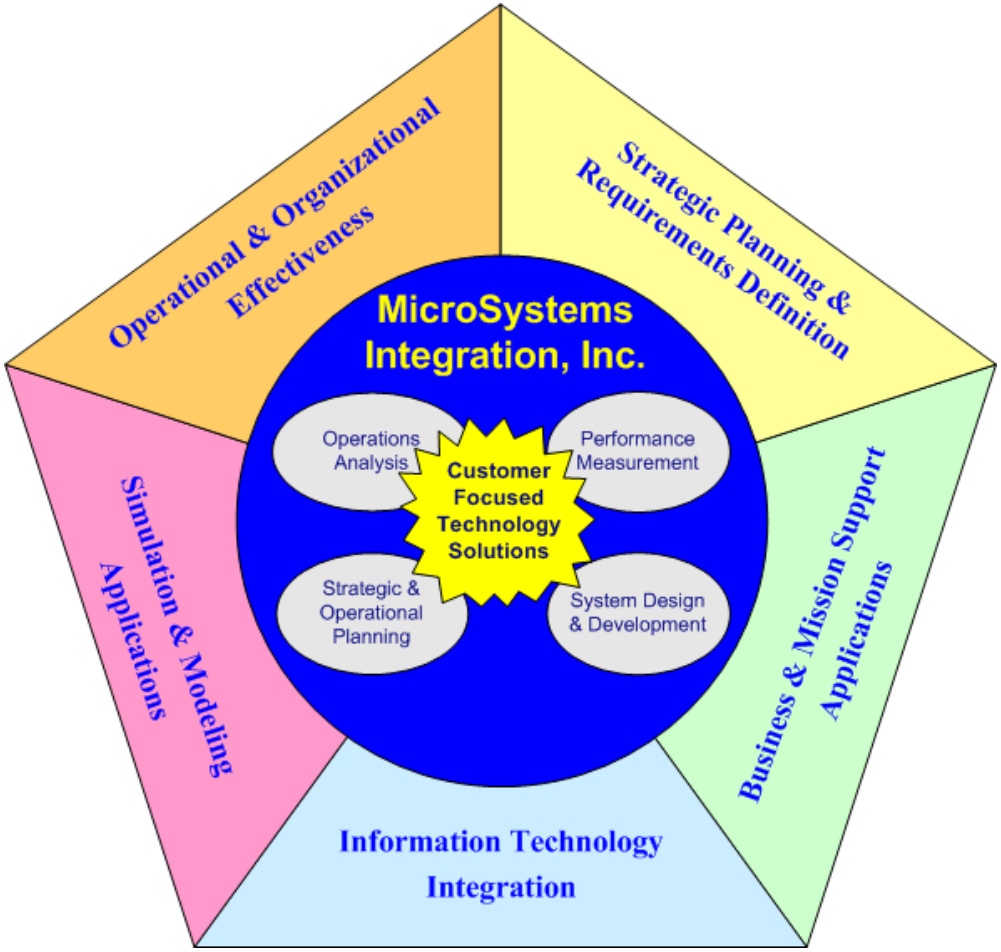
- MicroSystems Integration (MSI) is a veteran-owned small business with offices in Pawcatuck, Connecticut, that specializes in providing technical products and services in the broad areas of:
  - **Strategic & Operational Planning**
  - **Operations Analysis & Modeling**
  - **Performance Measurement**
  - **System Design & Development**
- MSI was founded in 1989 to develop innovative solutions for its customers by providing the highest quality multi-disciplinary technical services.
- MSI collaborates with its customers to understand their business and issues, integrating people and technology into cost-effective and productive systems to meet our clients' business needs in an increasingly challenging and competitive world marketplace.

MicroSystems Integration, Inc.

What We Do

MicroSystems Integration, Inc.

Applications of Capabilities & Expertise



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MicroSystems Integration, Inc.

Selected Customers

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Selected Partners

Booz | Allen | Hamilton
strategy and technology consultants

SRA INTERNATIONAL, INC.

wyle laboratories

THE TAURI GROUP

ACEL

pwc

CACI
EVER VIGILANT

BASE ONE TECHNOLOGIES
Customer Satisfaction Is Our Number One Priority

SHPI
advanced technology · native know-how

BayFirst SOLUTIONS LLC

vector CSP

FIVE RIVERS SERVICES, LLC

Truestone

Huntington Ingalls Industries

ABS Consulting

LOCKHEED MARTIN

MicroSystems Integration, Inc.

Contact Information

MicroSystems Integration, Inc.

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Pawcatuck, Connecticut 06379

www.msi-ct.com

(860) 599-1727

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MSI's Selected Contract Information

Contract Name	Prime	User Agencies
GSA Management, Organizational and Business Improvement Services (MOBIS), SINS: 874-1; Consulting Services	MSI	All Federal
DHS Technical, Acquisition and Business Support Services (TABSS): HSCG23-12-D-ATB002	BayFirst Solutions	DHS
DHS Technical, Acquisition and Business Support Services (TABSS): HSCG23-13-D-ATB041	SRA International	DHS
USCG R&DC System Engineering and Technical Assistance (SETA): HSCG32-13-D-R00002	Booz Allen Hamilton	Coast Guard
Technical Engineering Development and Support Services (TEDSS) for the U.S. Coast Guard's Command and Control Engineering Center: HSCG44-12-D-TEDSSB	Five Rivers Services	Coast Guard
HDTAT – Homeland Defense & Security (HD) Technical Area Tasks (TATs) Contract Program on Irregular Warfare (HD-14-0959)	Wyle Labs	DoD
SNIM – IDIQ Multiple Award Contract for Research and Development (R&D) and /or Advisory & Assistance Services (A&AS) related to R&D efforts: FA1500-10-D-0009	Wyle Labs	DoD

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NAICS Codes

541330	Engineering Services
541511	Custom Computer Programming Services
541512	Computer Systems Design Services
541519	Other Computer Related Services
541611	Administrative Management and General Management Consulting Services
541614	Process, Physical Distribution, and Logistics Consulting
541618	Other Management Consulting Services
541690	Other Scientific and Technical Consulting Services
541712	Research and Development in the Physical, Engineering, and Life Sciences (Except Biotechnology)
541720	Research and Development in the Social Sciences and Humanities
541990	All Other Professional, Scientific, and Technical Services
611430	Professional and Management Development Training
611699	All Other Miscellaneous Schools and Instruction

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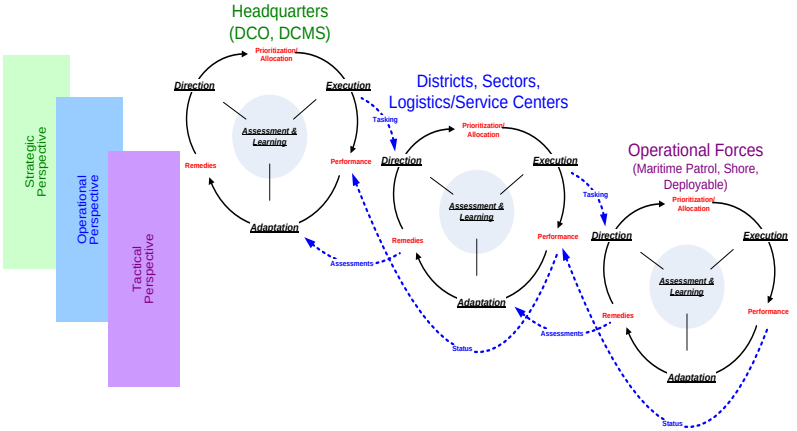
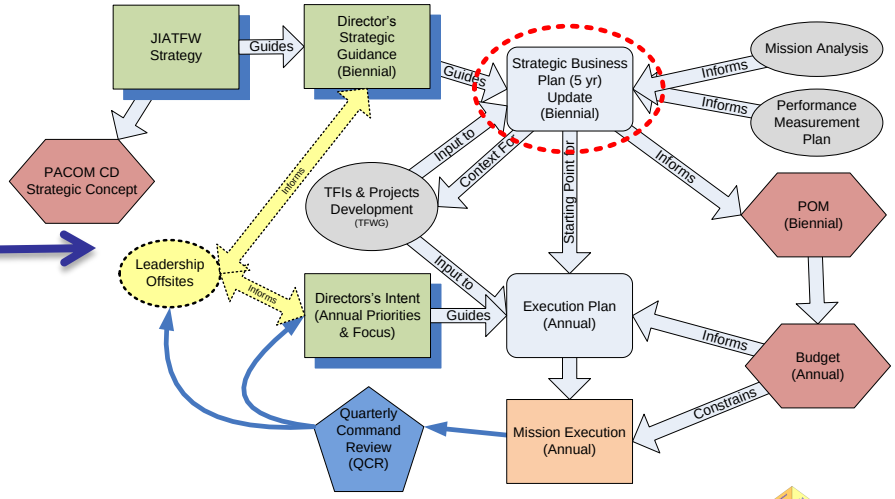
Strategic Planning & Requirements Definition

- Support to produce ***strategic plans, assessment strategies and projection tools*** to produce integrated process improvement.
- Example Projects:
  - Coast Guard Standard Operational Planning Process (SOPP)/ Global Force Management (GFM)
  - Strategic Planning & Requirements Development
    - Strategic Planning for JIATF West
    - Exercise Plans & Procedures for JDSCA





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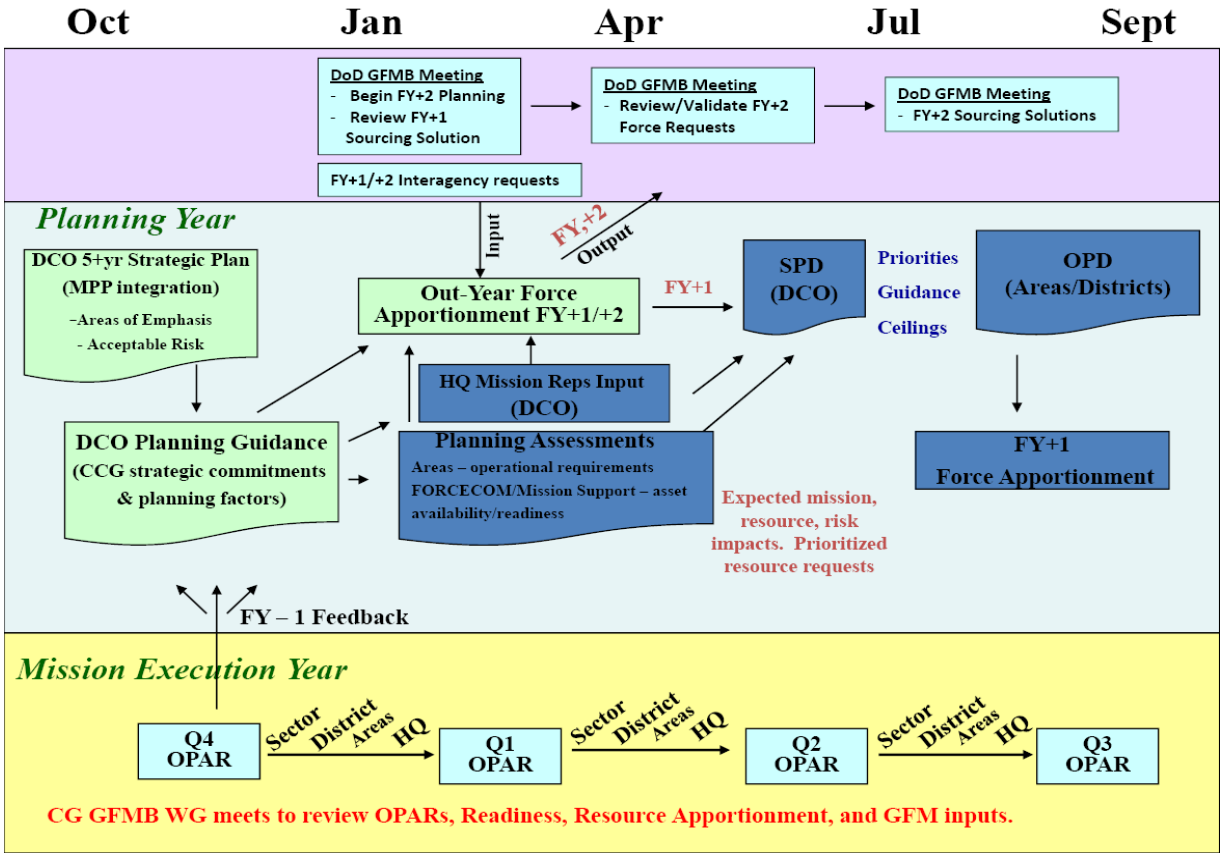
STRATEGIC PLANNING & REQUIREMENTS DEFINITION

Standard Operational Planning Process/ Global Force Management



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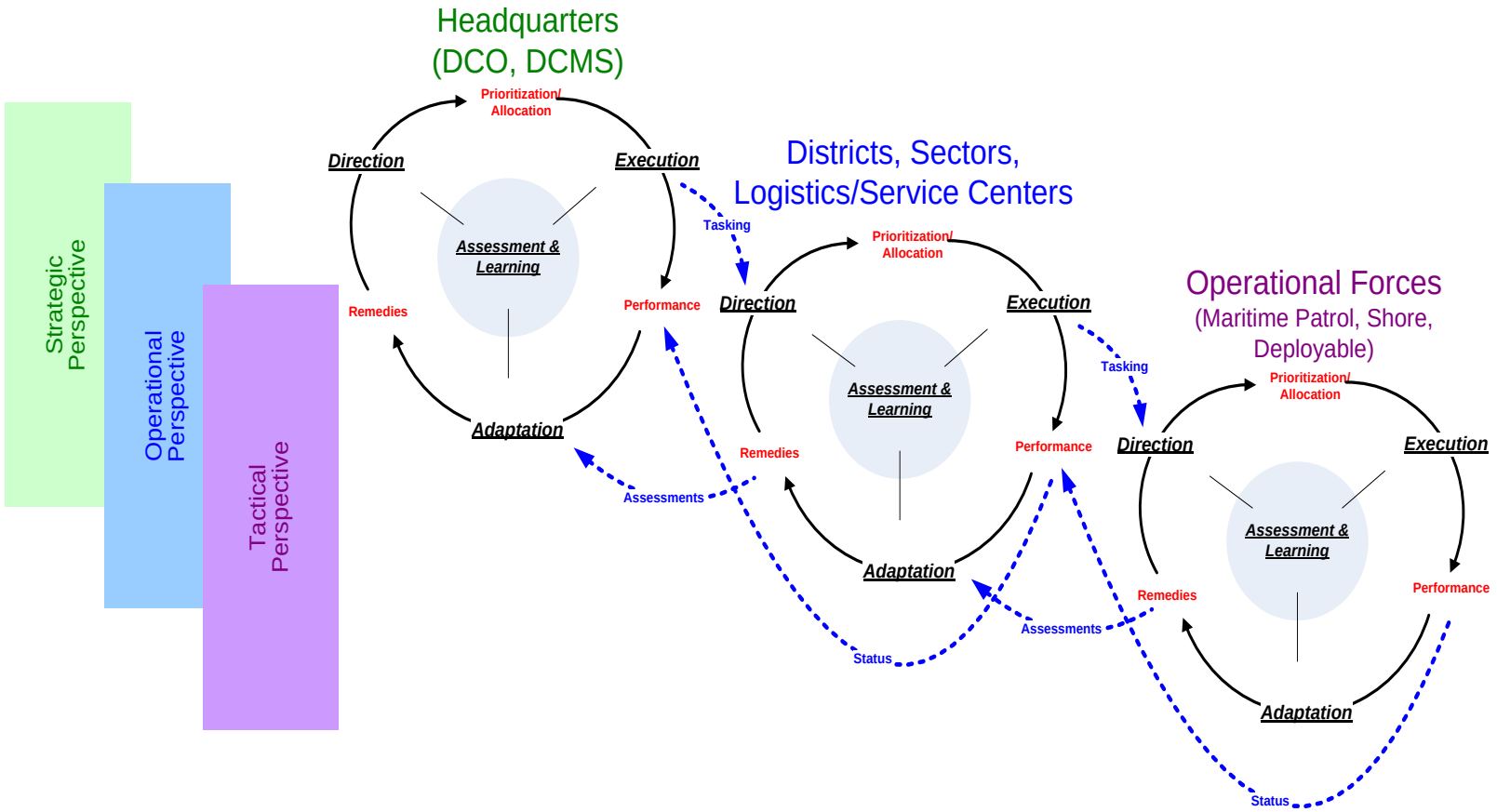
STRATEGIC PLANNING & REQUIREMENTS DEFINITION

Planning & Decision Making across Organizational Levels



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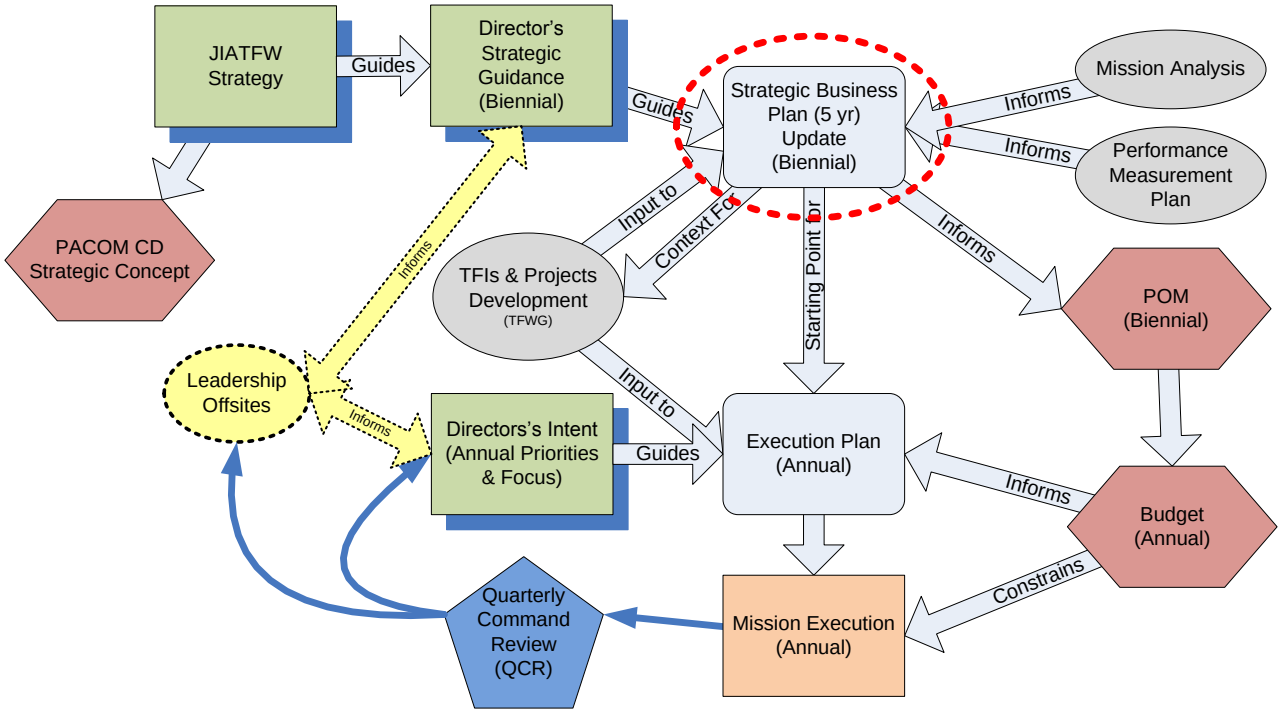
STRATEGIC PLANNING & REQUIREMENTS DEFINITION

Framework for Strategic Planning, Implementation, Prioritization & Performance Review



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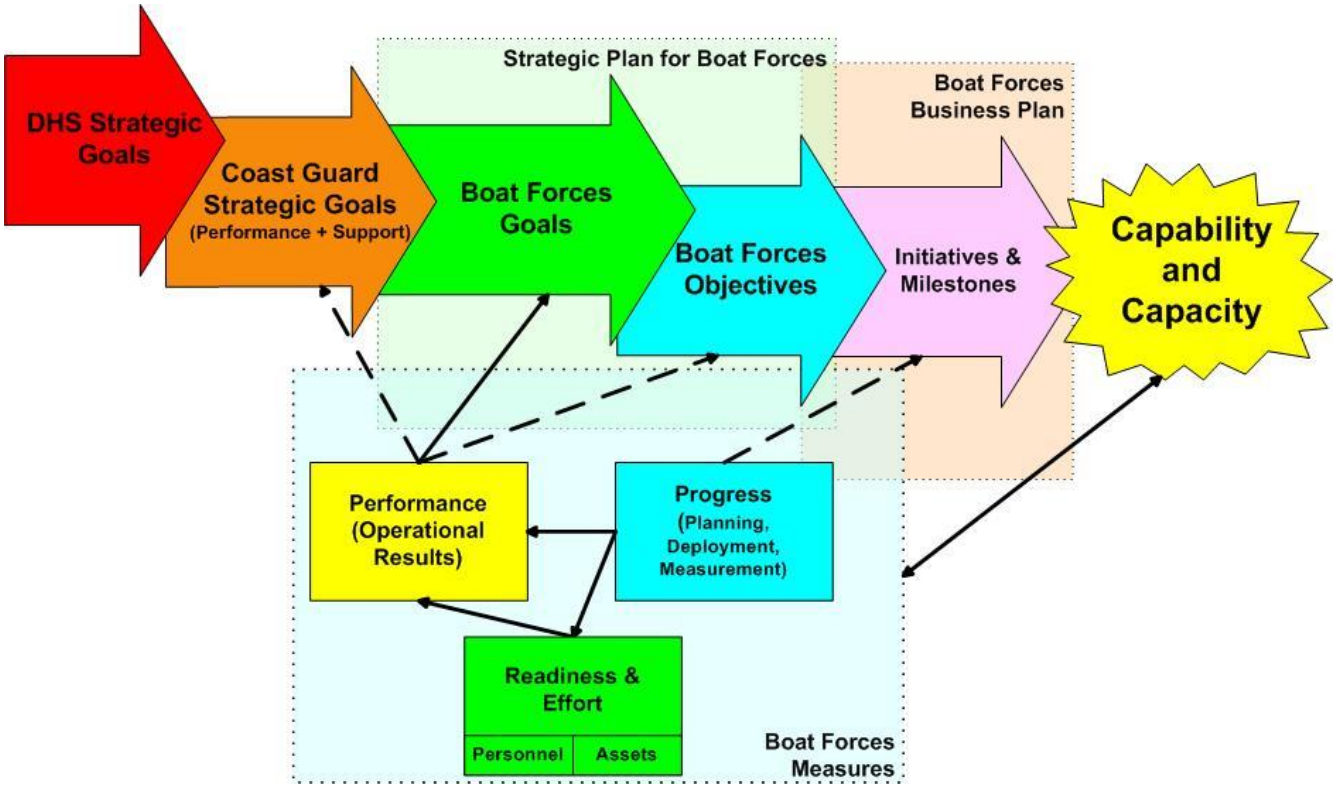
STRATEGIC PLANNING & REQUIREMENTS DEFINITION

Coast Guard Boat Forces Strategic Plan



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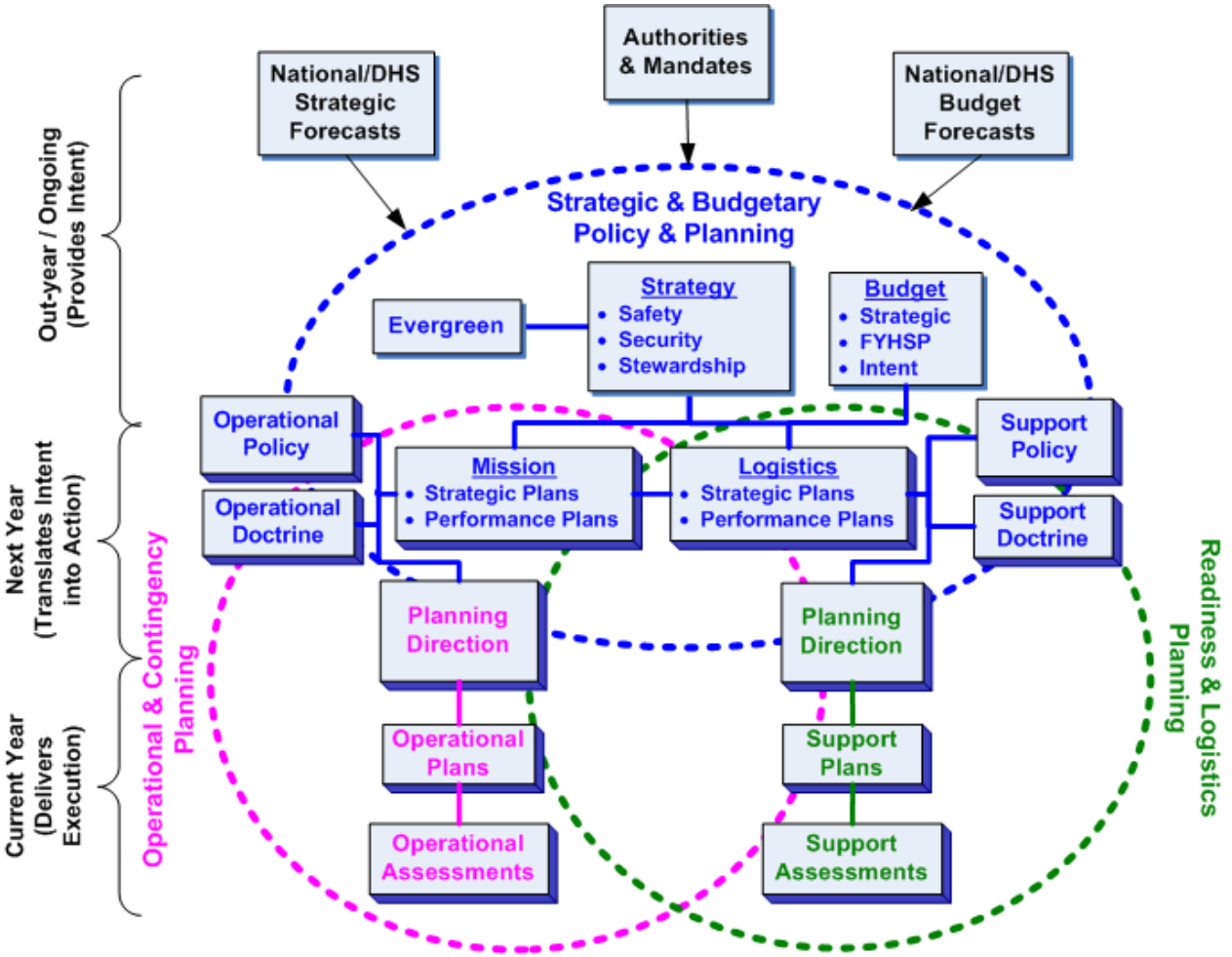
STRATEGIC PLANNING & REQUIREMENTS DEFINITION

Planning Product Alignment



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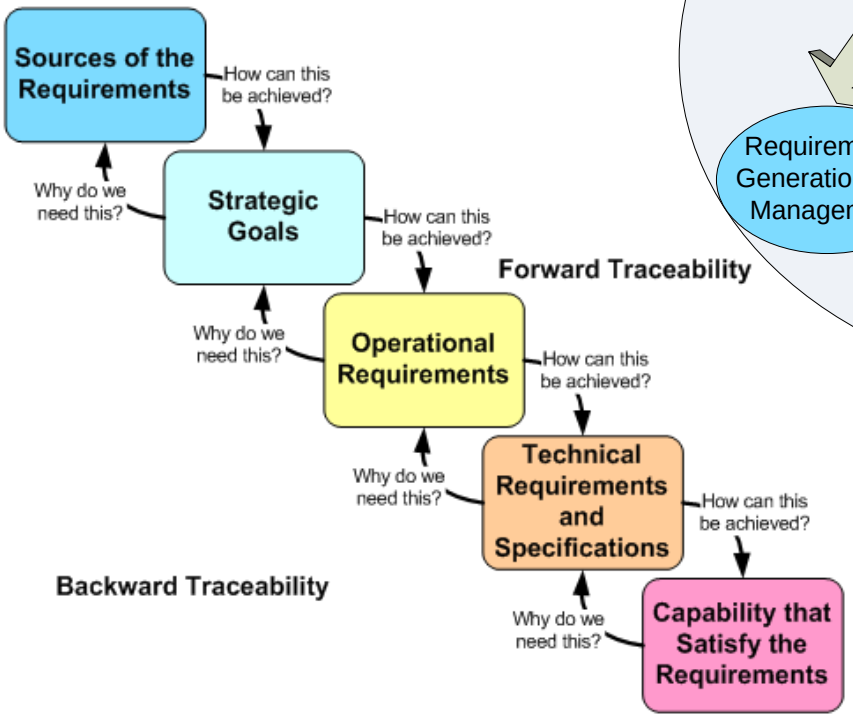
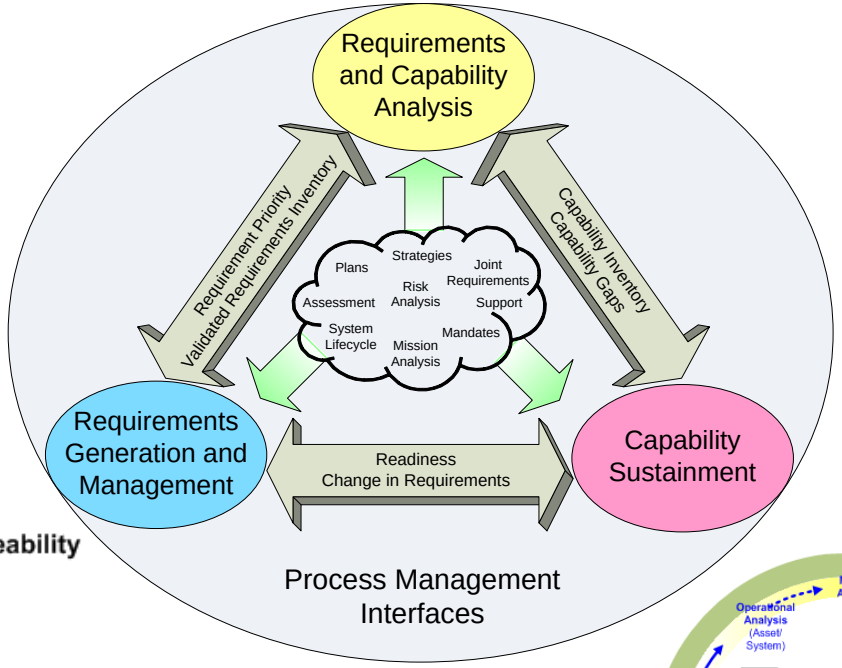
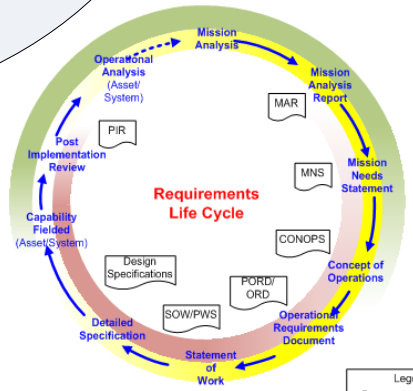
STRATEGIC PLANNING & REQUIREMENTS DEFINITION

Requirements and Capability Management







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Operational & Organizational Effectiveness

- Support to conduct analysis and assessment to produce ***integrated organizational improvement***.
- Example Projects:
  - Coast Guard Deployable Specialized Forces (DSF) Stem-to-Stern Review and Implementation Support
  - Coast Guard Modernization
  - Coast Guard Fleet Mix Analyses
  - DHS Cutter & Aviation Fleet Studies

System Laydown

Asset Class	POR-T	Min POR-T (CFS-1U)	Med POR-T (CFS-2U)
WMSL/ NSC	8	6	7
WMSM-T	25	29	27
Total Major Cutters	33	35	34
H-65	82	84	83
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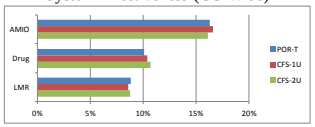
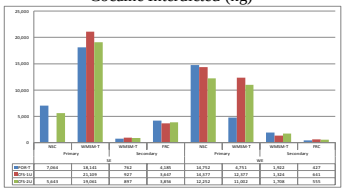
System Effectiveness (CG-Wide)



Drug Effectiveness – Cocaine Interdicted (kg)



Asset Contribution – Proactive Mission TOI Prosecutions

Class	Target Mission	POR-T	CFS-1U	% Diff	CFS-2U	% Diff
WMSL/ NSC	AMIO	4	2	-47%	1	-62%
	Drug	25	7	-71%	21	-19%
	LMR	26	28	8%	27	3%
WMSL/ NSC Total		**55**	**37**	**-32%**	**49**	**-11%**
WMSM-T	AMIO	121	140	16%	125	4%
	Drug	62	75	22%	69	11%
	LMR	1,054	1,042	-1%	1,060	1%
WMSM-T Total		**1,237**	**1,258**	**2%**	**1,254**	**1%**
Grand Total		**1,292**	**1,295**	**0%**	**1,303**	**1%**

MicroSystems Integration, Inc.

Accolades

"MSI's creation of the interdiction chain model to assess capability and capacity gaps at each point along the drug interdiction continuum, complemented by the application of campaign-level modeling and simulation tools to assess and compare the operational effectiveness of various force combinations proposed to close documented gaps, were instrumental in providing operators and policy makers the information needed to make informed allocation, acquisition and policy decisions."

2010 United States Interdiction Coordinator's (USIC) Award for "Superior Performance"

MicroSystems Integration, Inc.

OPERATIONAL & ORGANIZATIONAL EFFECTIVENESS

Western Hemisphere Transit Zone Performance Gap Analysis

Updated & Derived Mission Requirements & Goals

2004–2008 Transit Zone Requirements Study

PGA Process

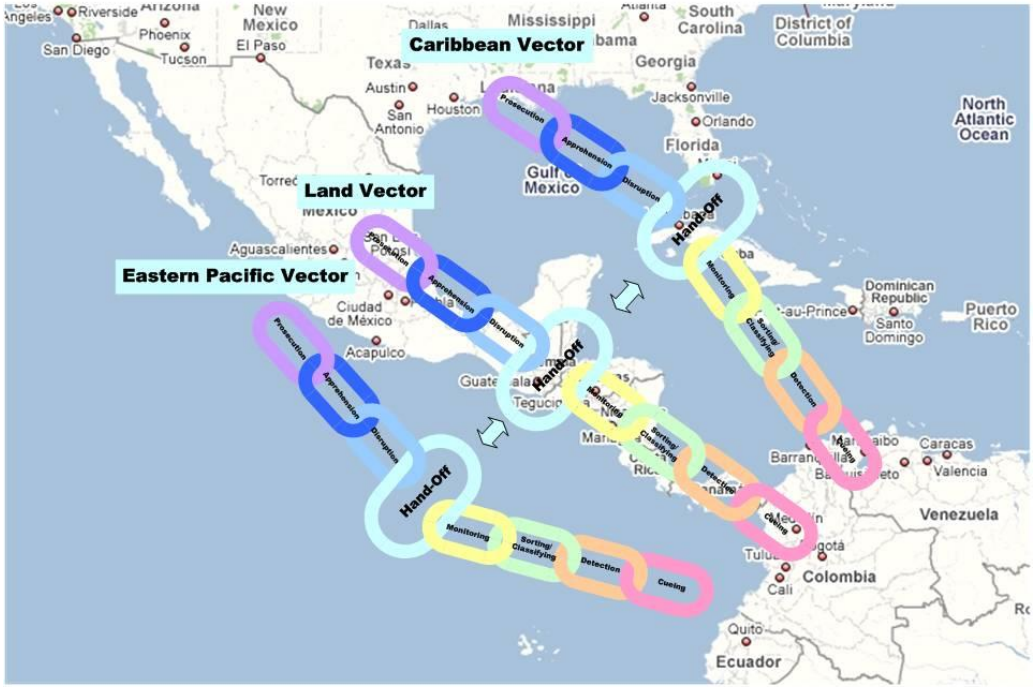
- Requirements/Threat Analysis
- Projected Capability/Capacity
- Ops Analysis/ Effectiveness Assessment
- Requirements Reconciliation & Update

2010–2014 Transit Zone Requirements

Counternarcotics Budget (2010–2014)

Annualized Resource & Capabilities Requirements

CBP	FBI	NORTHCOM
DEA	ICE	ONDCP
DHS-CNE	JIATF-S	PANEX
DIA	JIATF-W	SOUTHCOM
DoD	JTF-N	TIC
DOS INL	NDIC	USCG



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OPERATIONAL & ORGANIZATIONAL EFFECTIVENESS

Readiness Metrics Development

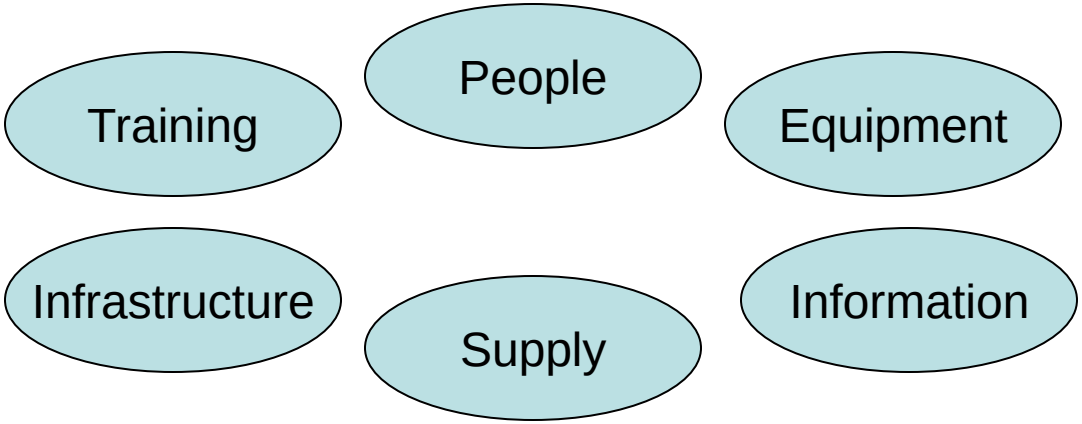
Quick Snapshot

- Rapid outreach survey
- Data analysis
- Dashboard development

Standing Metrics Development

- Database research
- Best practices
- Unit surveys
- Internal & external reporting requirements

Six Facets of Readiness



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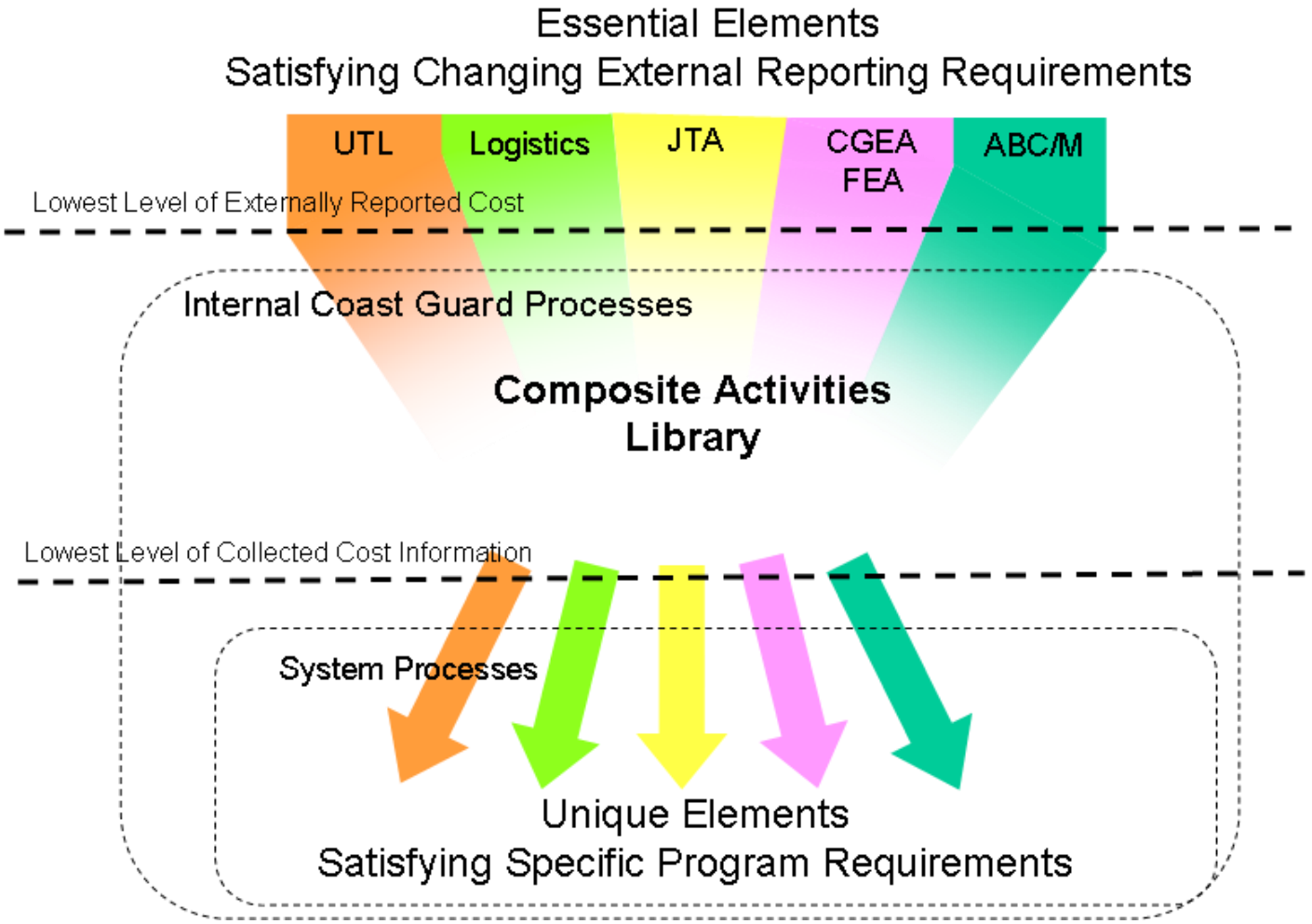
OPERATIONAL & ORGANIZATIONAL EFFECTIVENESS

Activity Alignment



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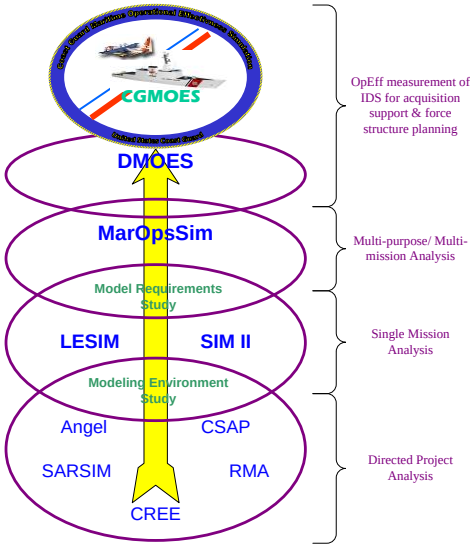
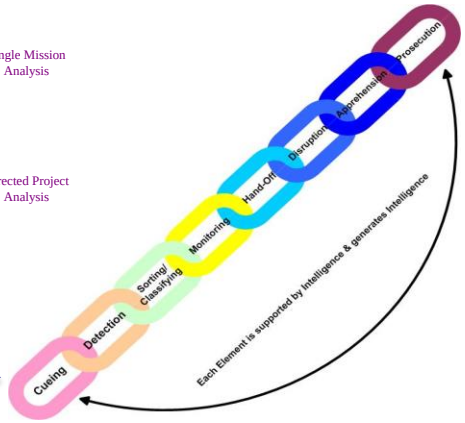
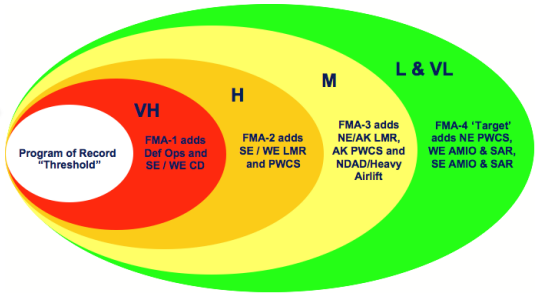
Simulation & Modeling Applications

- Apply academic, operational, and industry background to ***analysis, development, and support of simulation and modeling applications***.
- Example Projects:
  - Coast Guard Maritime Operational Effectiveness Simulation (CGMOES)
  - Western Hemisphere Transit Zone Performance Gap Analysis
  - Coast Guard Fleet Mix Analyses
  - DHS Cutter Fleet Studies







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Accolades

"The operational effectiveness model and other analytical methods the Coast Guard used have proved useful for guiding decisions on the revised Deepwater asset mix.… In performing our review of the Coast Guard's model, we reviewed computer simulation model criteria developed by an authority in the field of simulation modeling and found that the model successfully addressed these criteria."

GAO. Changes to Deepwater Plan Appear Sound, and Program Management Has Improved, but Continued Monitoring Is Warranted (GAO-06-546; April 2006)

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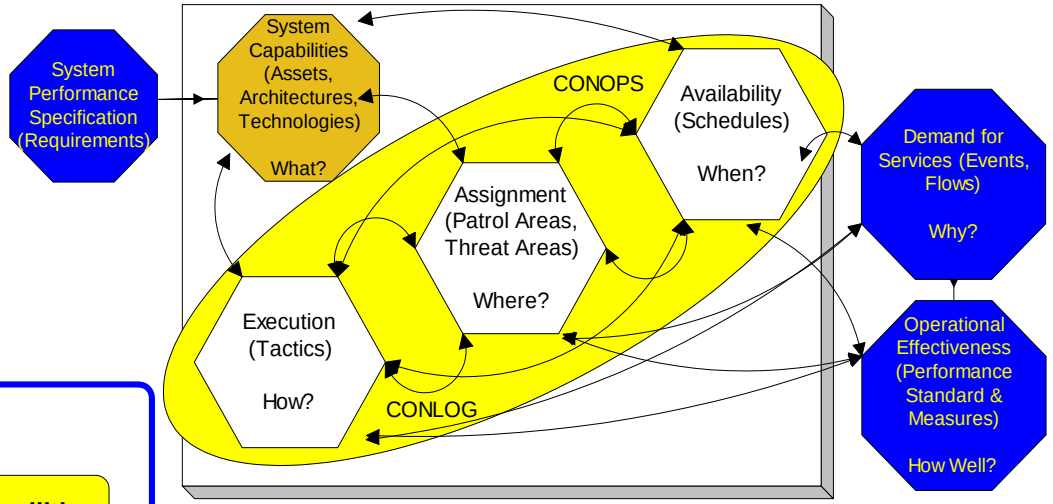
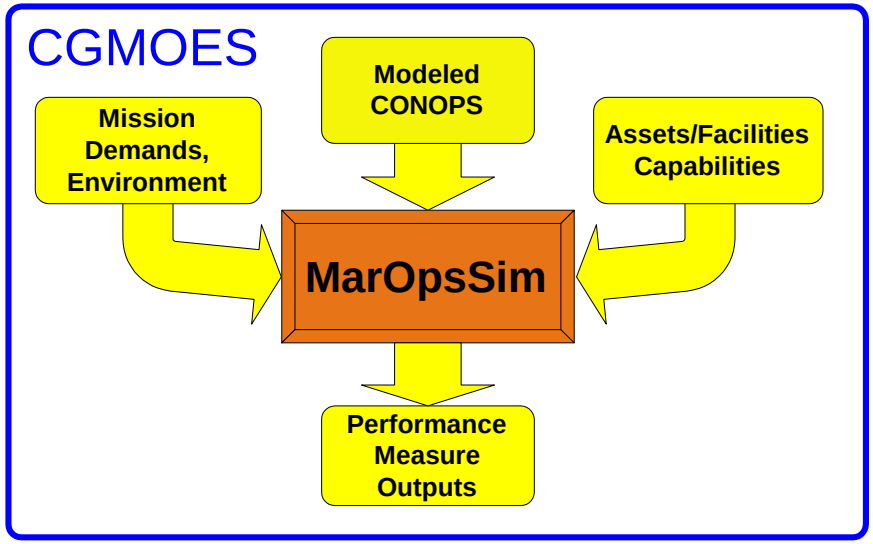
SIMULATION & MODELING APPLICATIONS

Campaign Modeling





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SIMULATION & MODELING APPLICATIONS

Acquisition Support

- *S-D-C-I-P Analysis*
- *Trade Studies*
- *MSMP*
- *Modeled CONOPS*

- *Campaign Modeling*
- *Performance Measures*
- *Mission Outcomes*
- *Performance Gap/ Fleet Mix Analyses*

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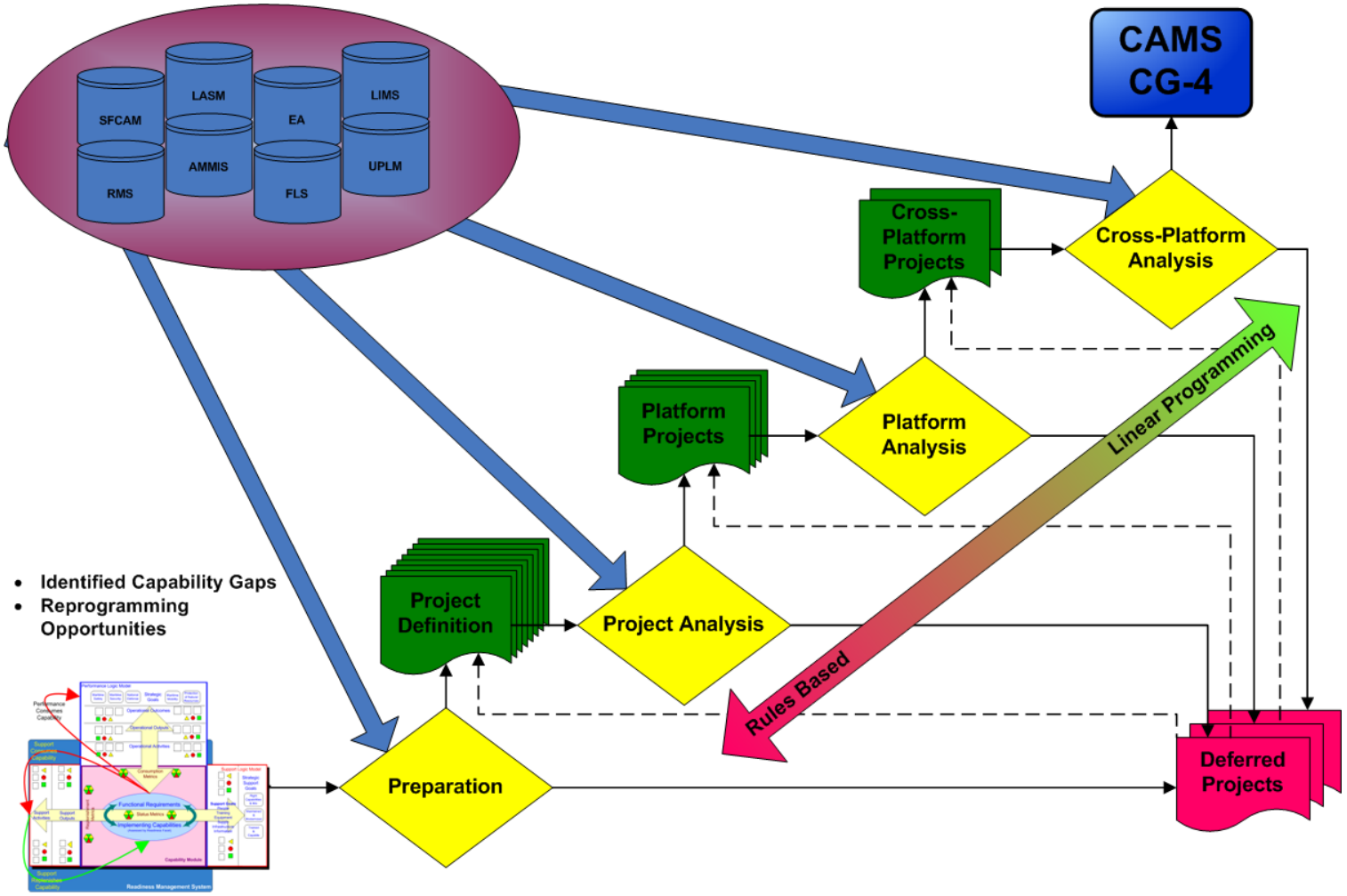
SIMULATION & MODELING APPLICATIONS

Legacy Asset Sustainment Model (LASM)



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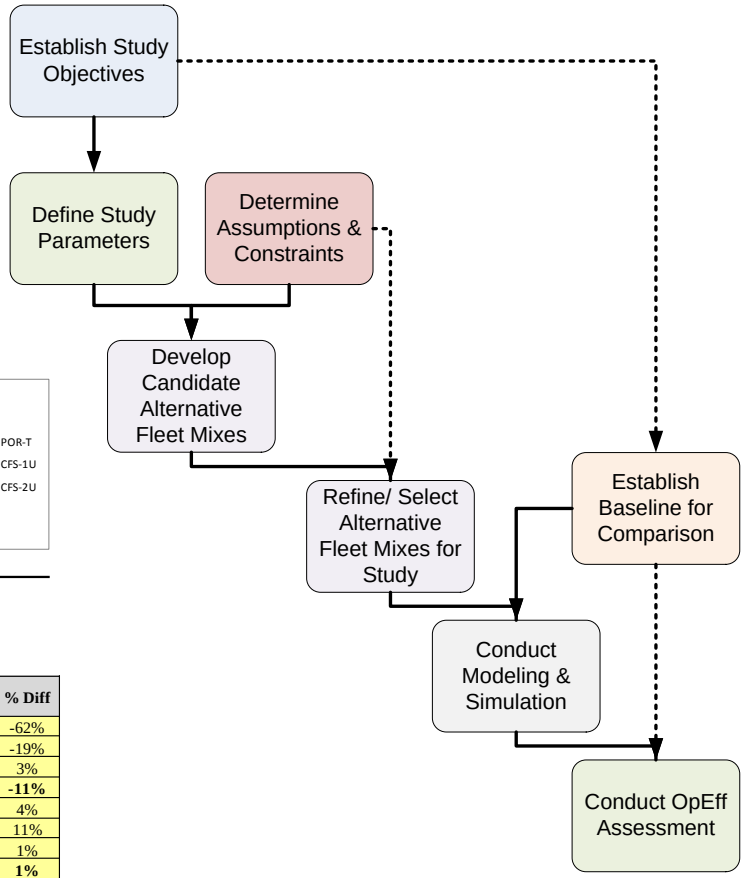
SIMULATION & MODELING APPLICATIONS

DHS Cutter Fleet Studies



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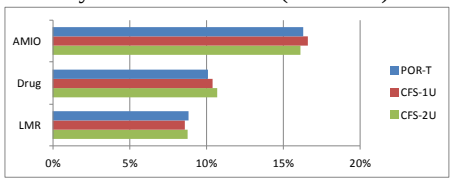
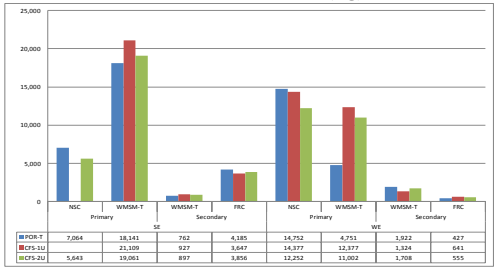
System Effectiveness (CG-Wide)



Drug Effectiveness – Cocaine Interdicted (kg)



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SIMULATION & MODELING APPLICATIONS

SEA FIGHTER (FSF-1)

ENGAGEMENT MODELING

- *High Speed*
- *Multiple Deployable Assets*

HUMAN FACTORS MODELING

- *Optimal Crewing*

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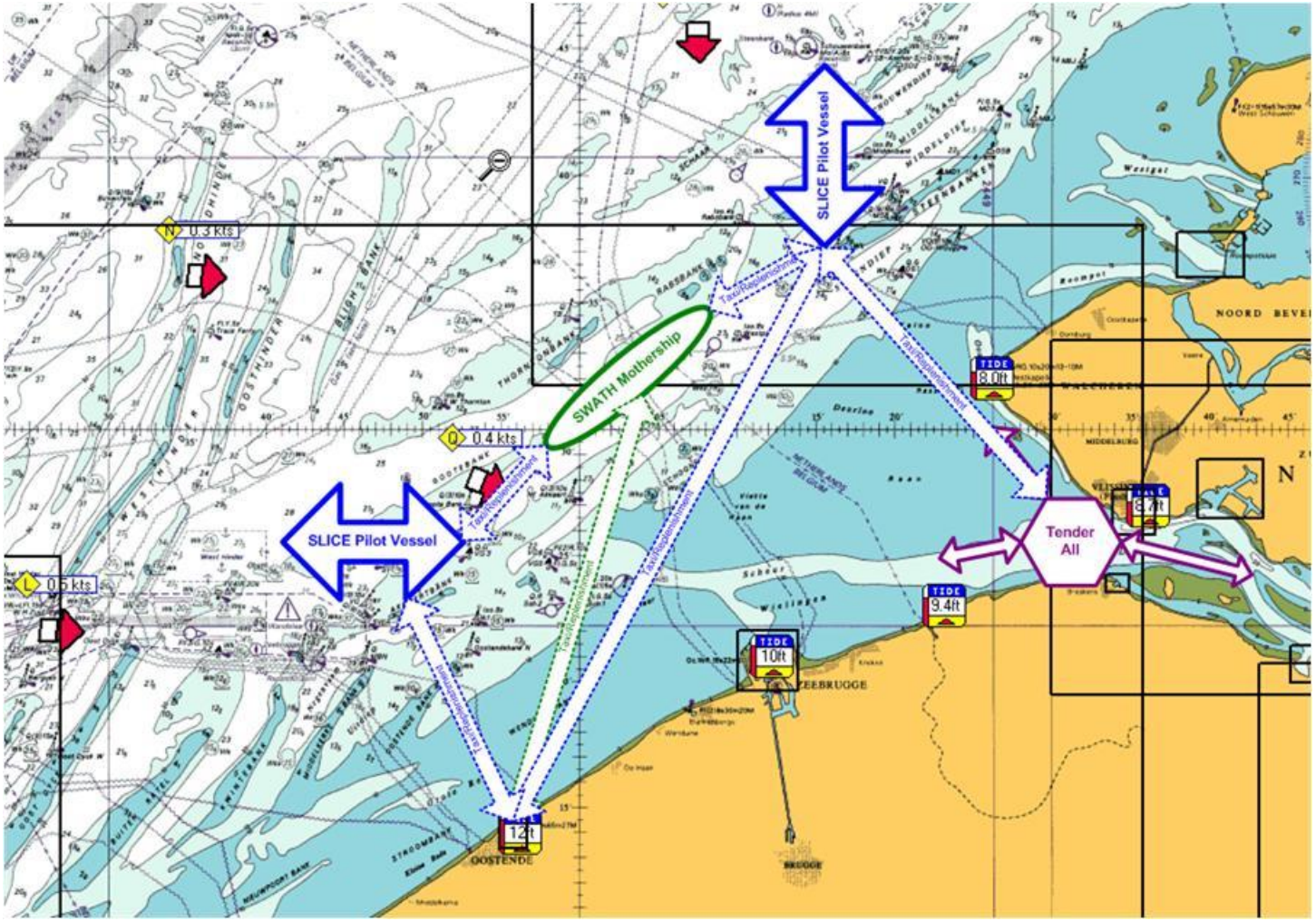
SIMULATION & MODELING APPLICATIONS

Flemish (Belgium) Offshore Pilot Optimization



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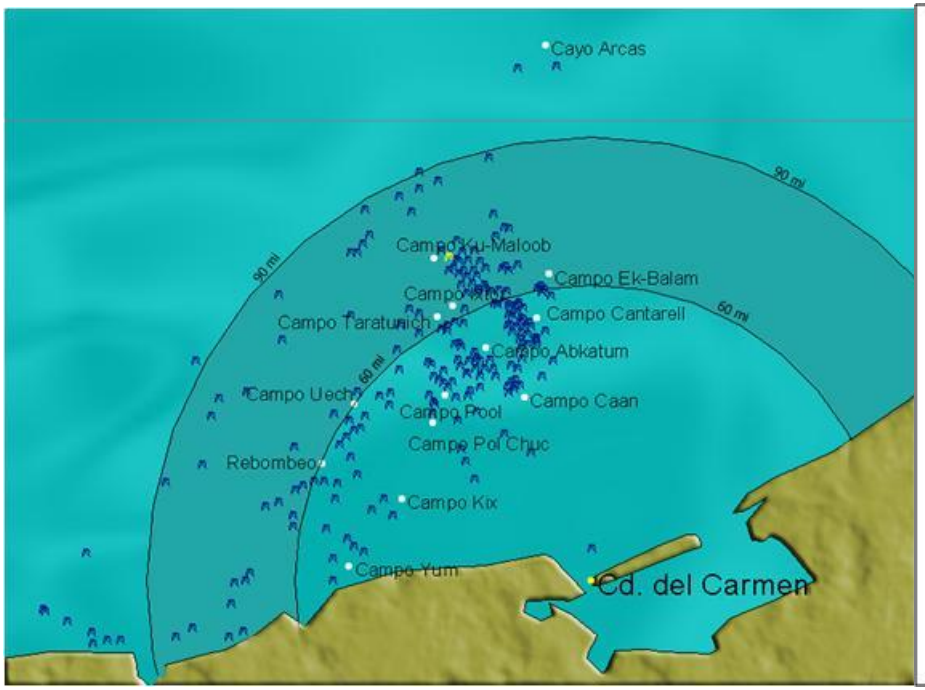
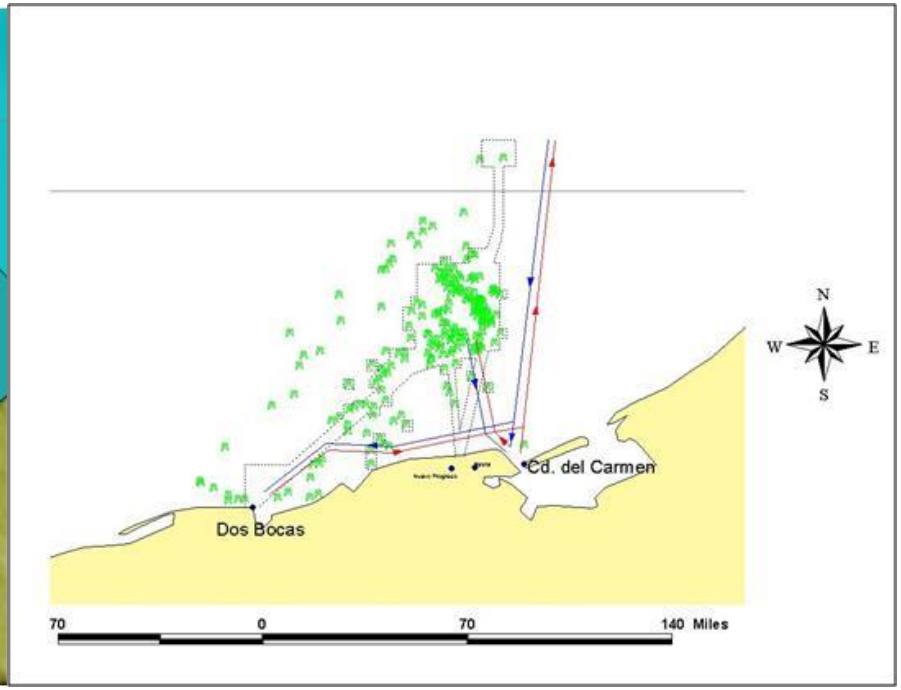
SIMULATION & MODELING APPLICATIONS

PEMEX Campeche Basin Offshore Crewboat Optimization





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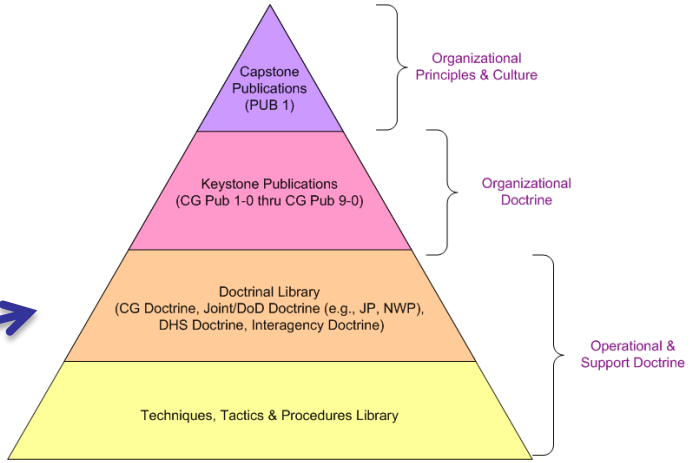
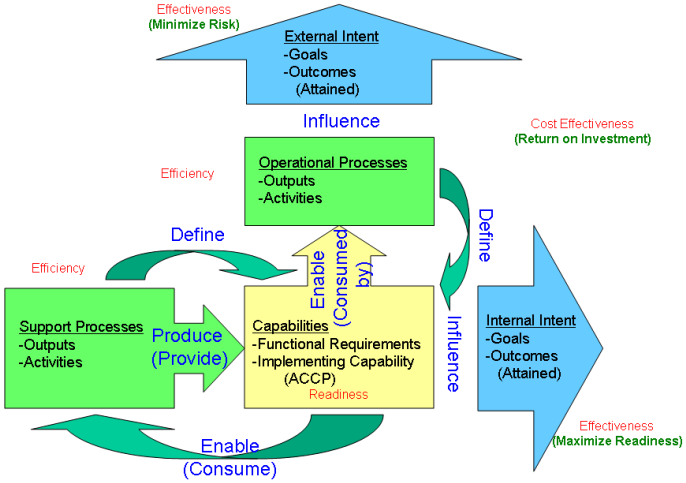
Business & Mission Support Applications

- ***Design, development, integration, testing & support of enterprise applications*** to support customer goals.
- Example Projects:
  - Coast Guard Doctrine Development
    - Coast Guard Operations (Pub 3-0 series)
    - Coast Guard Planning (Pub 5-0)
    - Capability Analysis and Management (Pub 7-0)
  - Unified Performance Logic Model (UPLM)
  - Great Lakes Pilotage Study





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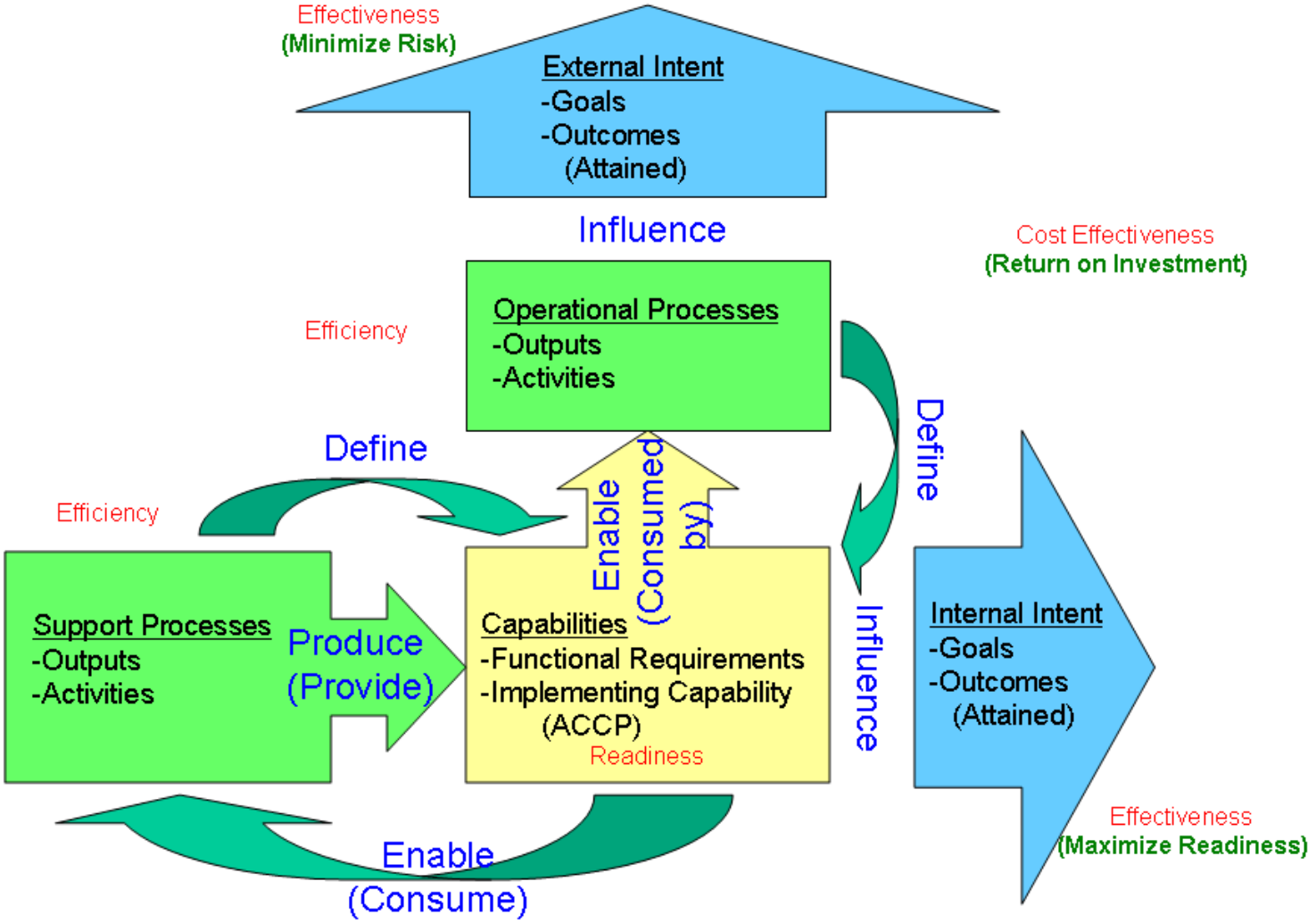
BUSINESS & MISSION SUPPORT APPLICATIONS

Unified Performance Logic Model (UPLM)



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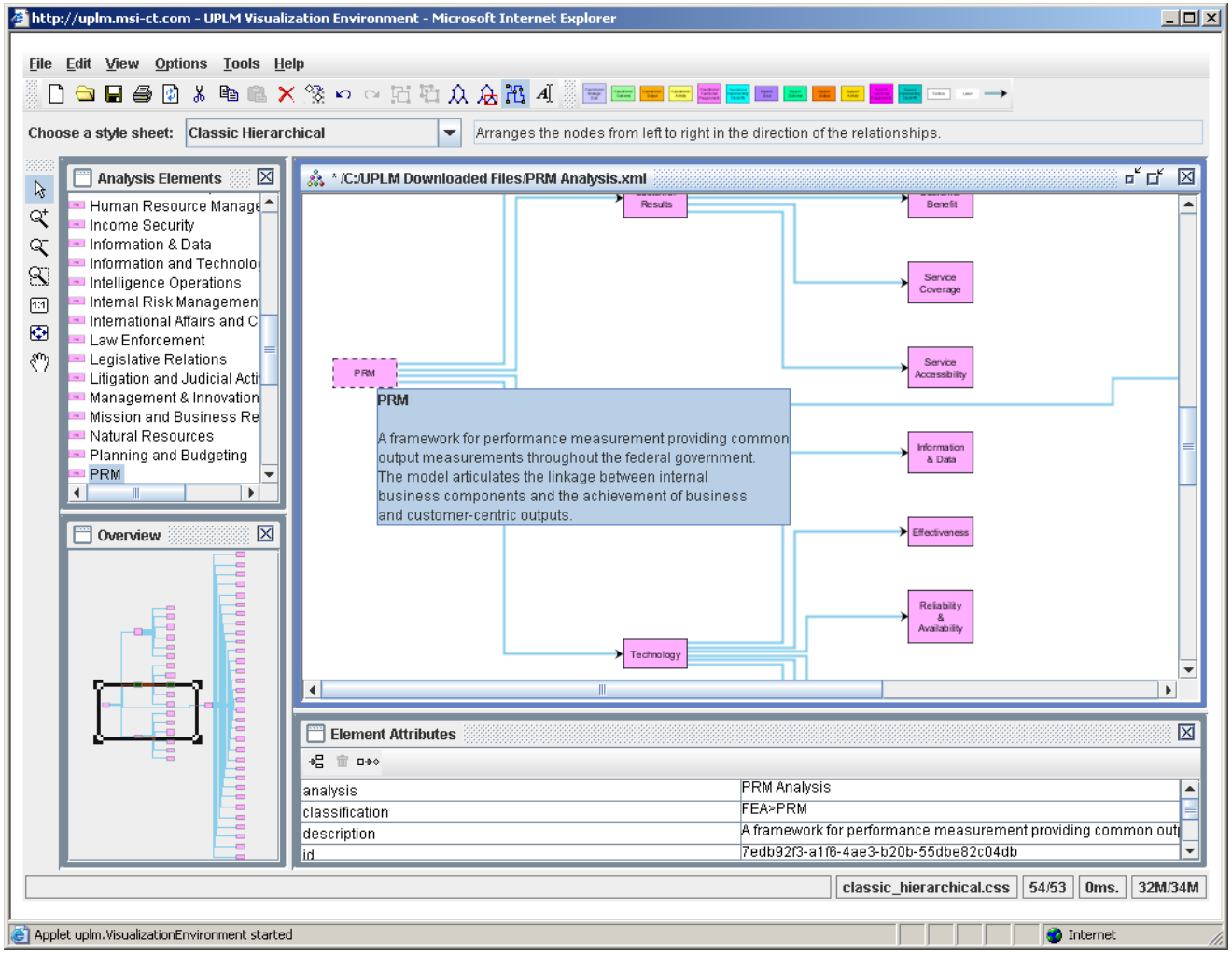
BUSINESS & MISSION SUPPORT APPLICATIONS

Visualizing/Creating Organizational Relationships



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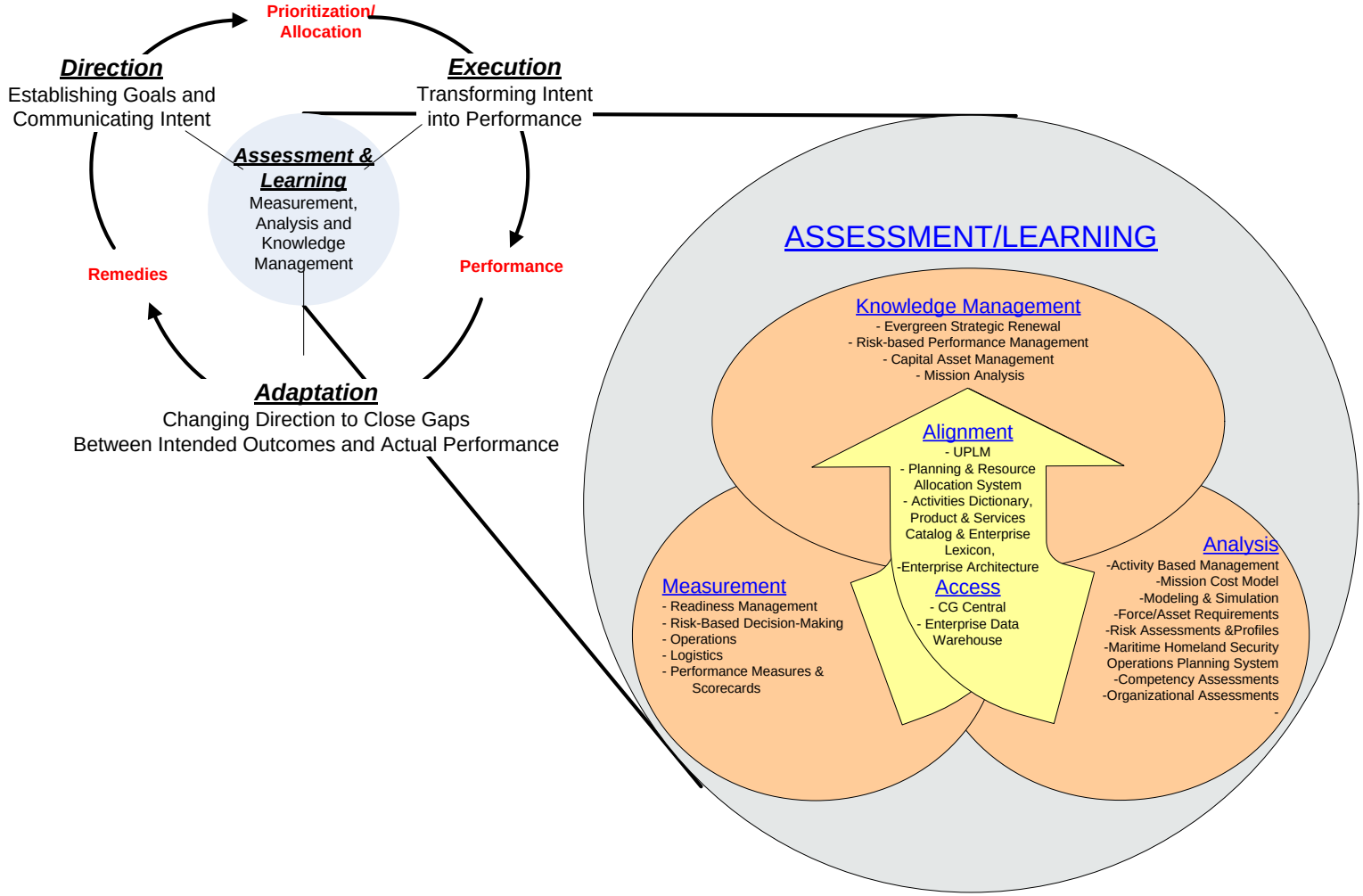
BUSINESS & MISSION SUPPORT APPLICATIONS

ELA Supporting Framework – Assessment & Learning



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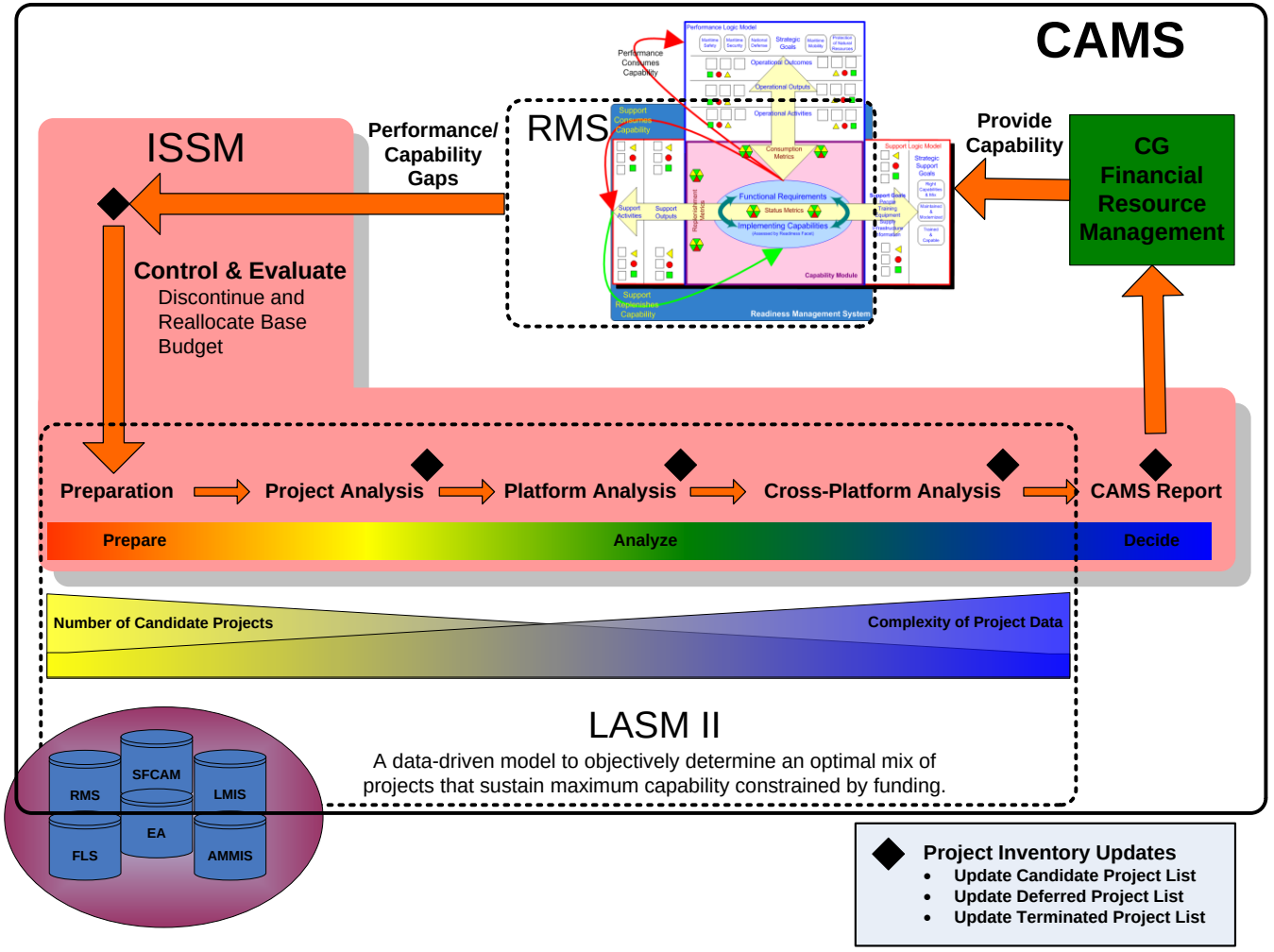
BUSINESS & MISSION SUPPORT APPLICATIONS

Capital Asset Management Strategy (CAMS)



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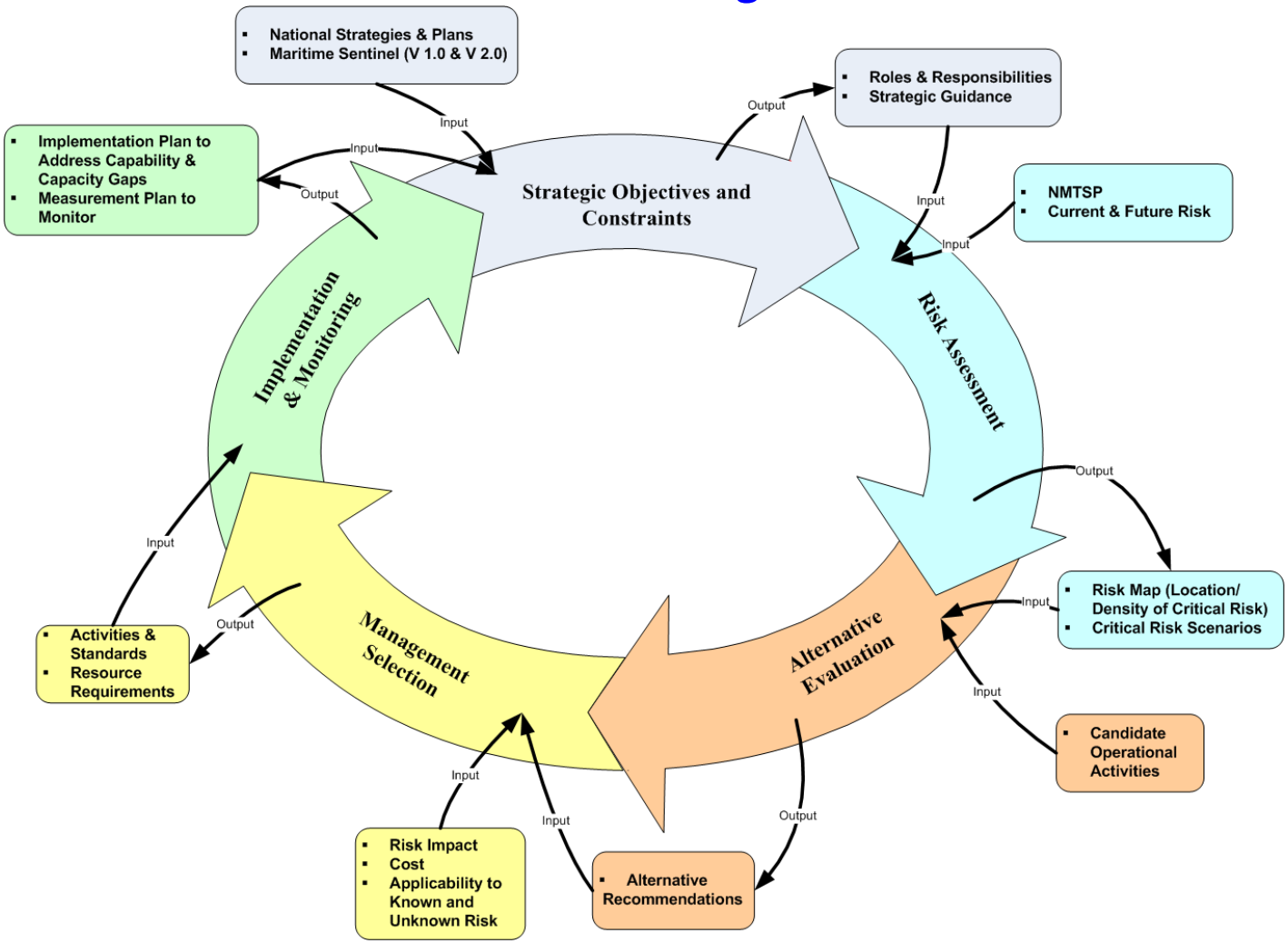
BUSINESS & MISSION SUPPORT APPLICATIONS

CMT Risk Management Process



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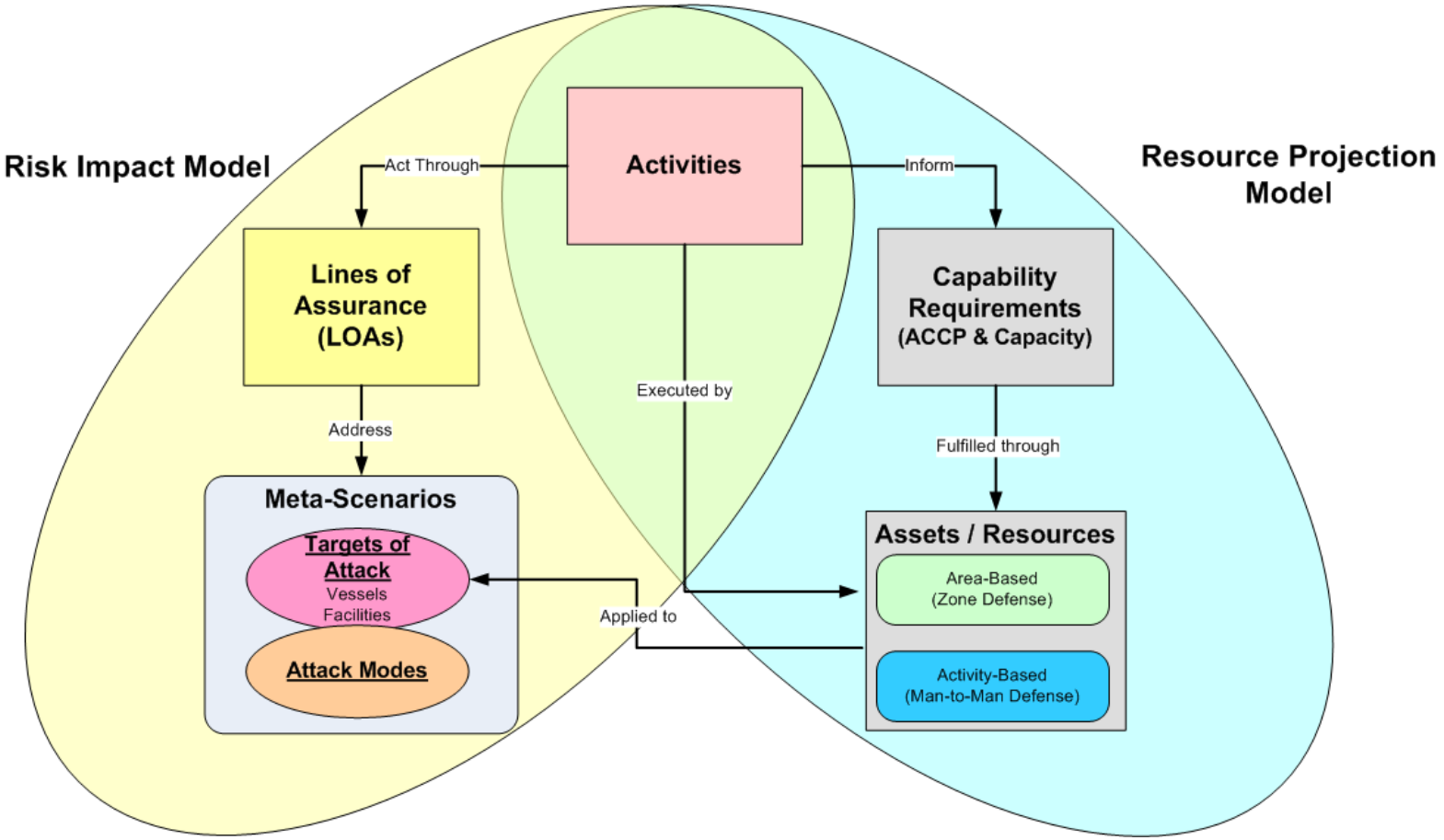
BUSINESS & MISSION SUPPORT APPLICATIONS

CMT Risk Reduction Optimization



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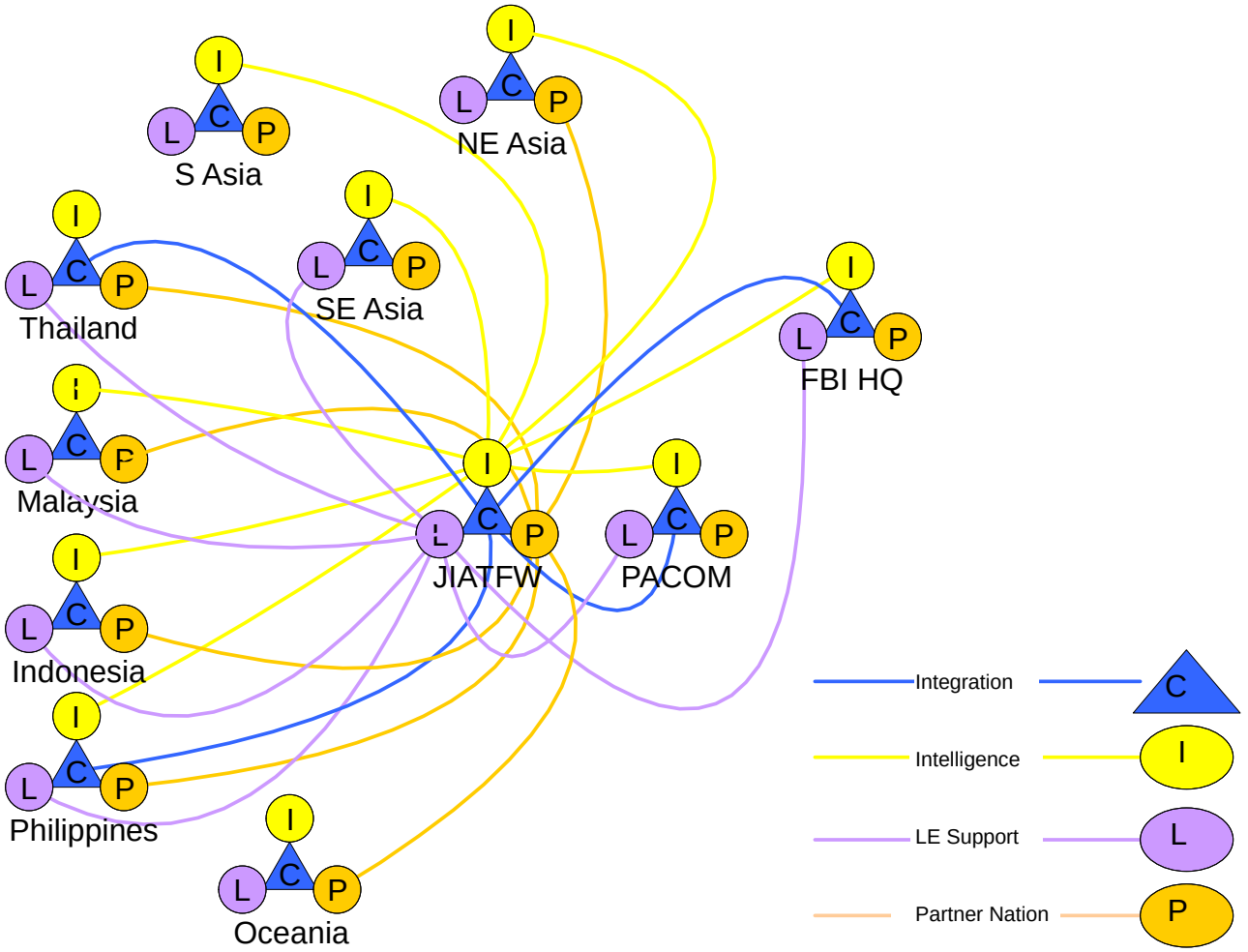
BUSINESS & MISSION SUPPORT APPLICATIONS

JIATF West Networked Operations (Notional)



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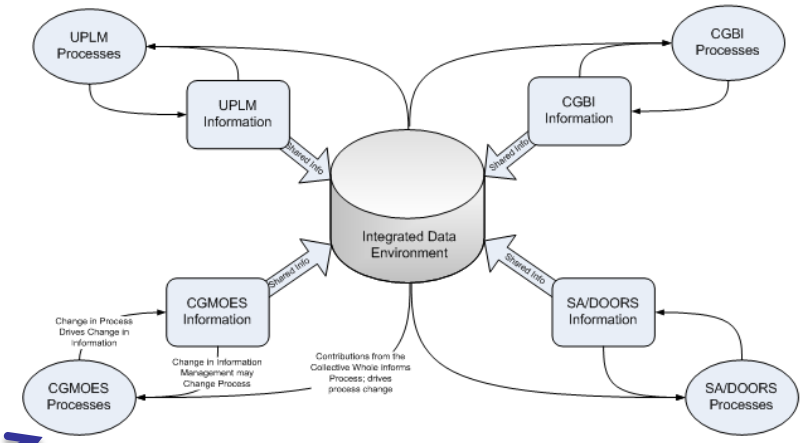
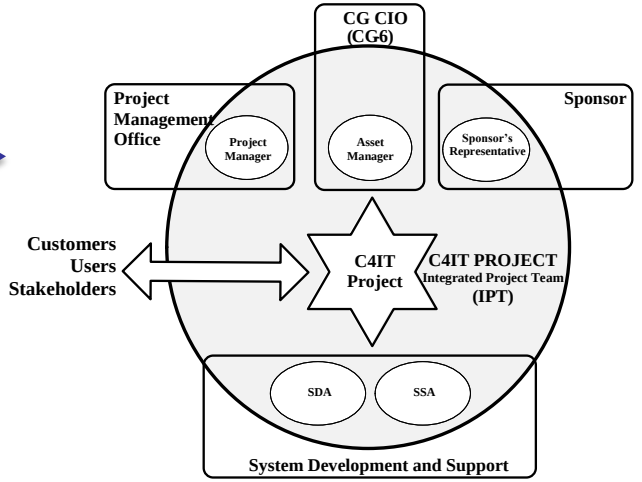
Information Technology Integration

- Apply background in IT to commercial & government applications to ***conceptualize, plan, design, develop, integrate, test & support enterprise information systems***.
- Example Projects:
  - Coast Guard System Engineering Integration (SEI)
  - Establishment of CG-6 & System Development Life Cycle (SDLC)
  - CG-6 and TISCOM C4&IT Business Plans
  - Requirements Analysis for Coast Guard Data Network





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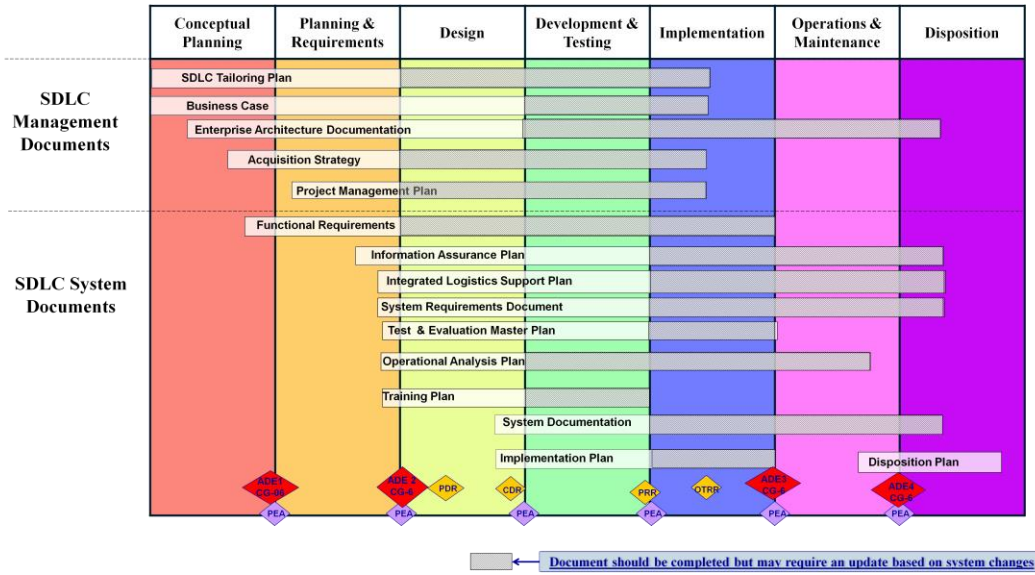
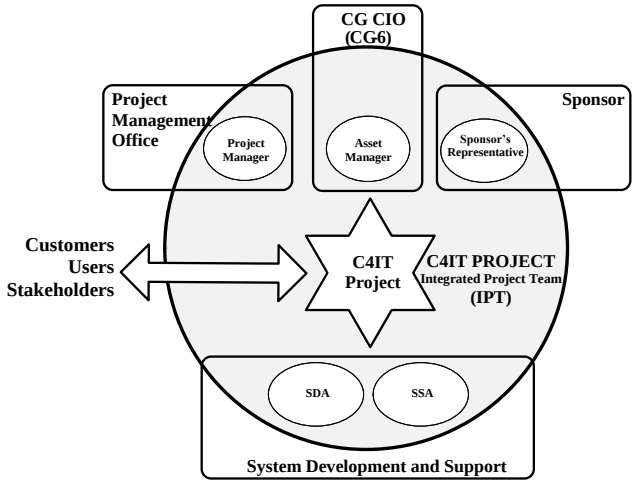
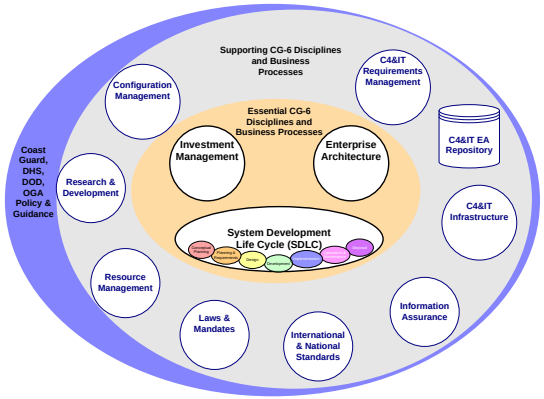
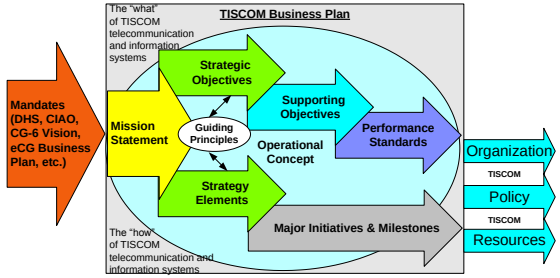
INFORMATION TECHNOLOGY INTEGRATION

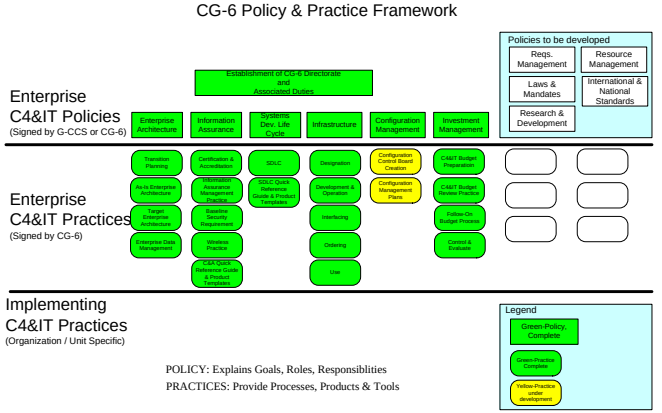
Strategic Planning and Procedures











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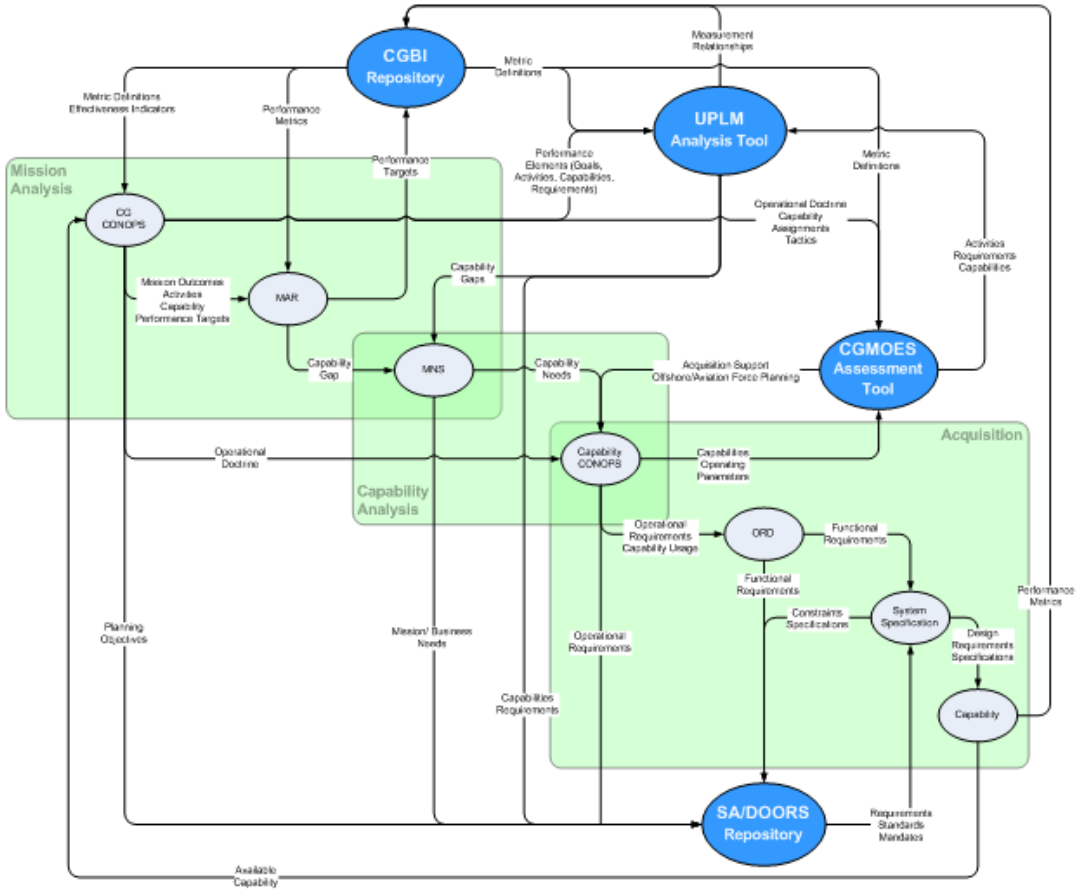
INFORMATION TECHNOLOGY INTEGRATION

Shared Information Supporting Key Processes



Information shared across systems (blue circles) in support of key mission analysis and acquisition processes

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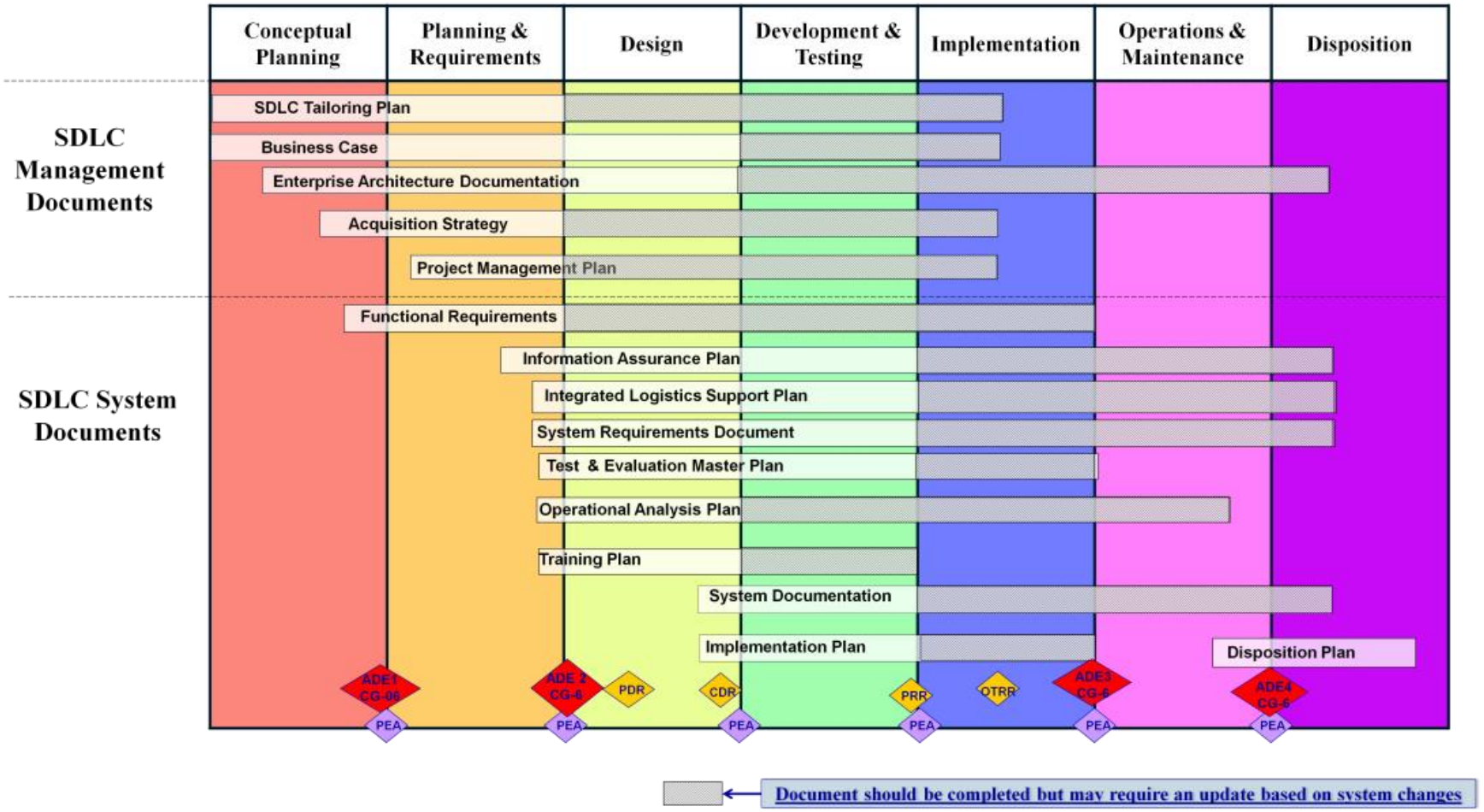
INFORMATION TECHNOLOGY INTEGRATION

System Development Life Cycle



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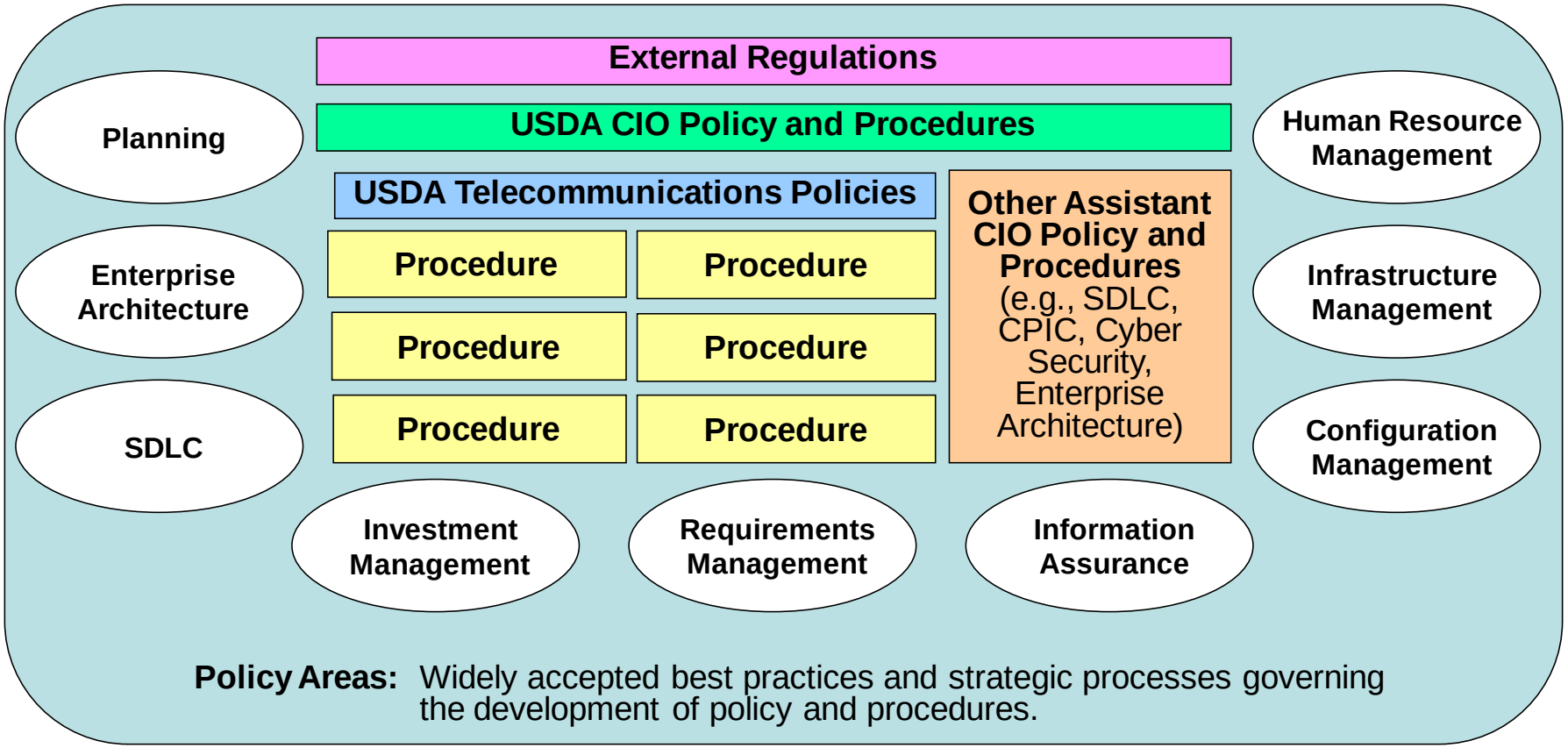
INFORMATION TECHNOLOGY INTEGRATION

USDA Policy & Practice Alignment



Policy Areas: Widely accepted best practices and strategic processes governing the development of policy and procedures.

MicroSystems Integration, Inc.

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