









TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

A Systems Engineering Model for Roadmap Alignment

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INTRODUCTION



- 1. Discuss problem space
- 2. Discuss condition of problem space
- 3. Discuss affinity process
- 4. Discuss architectural function
- 5. Roadmap alignment

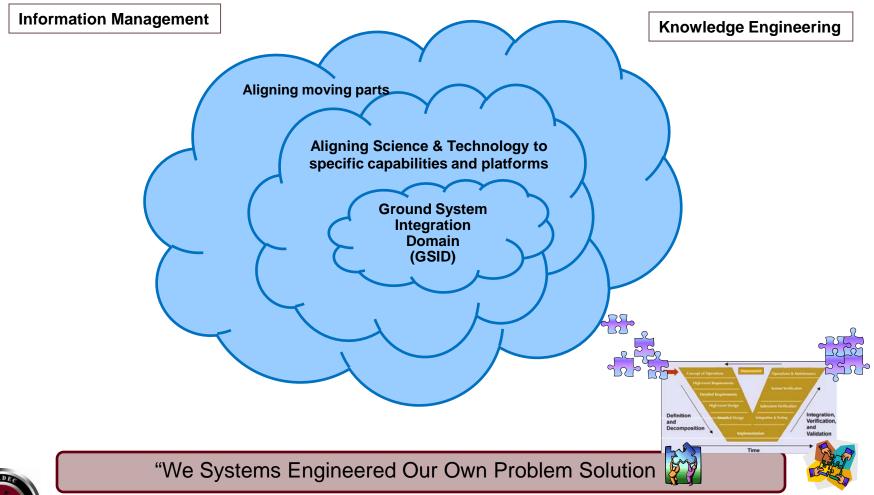




BREAKDOWN OF THE PROBLEM SPACE



Things evolve at their own rate!

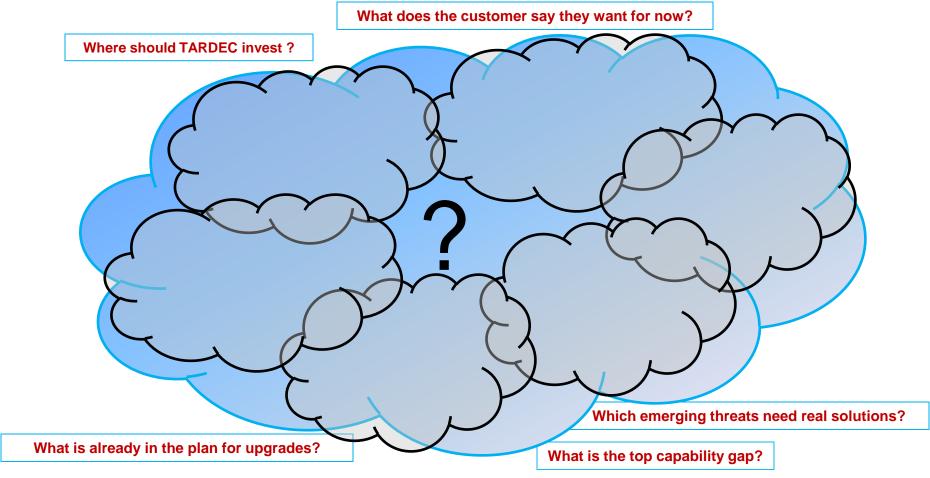






TARDEC PROBLEM - CURRENT SCENARIO





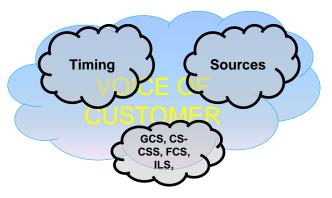
Things do not align themselves!

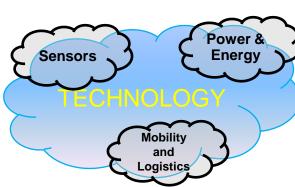




TARDEC PROBLEM - CURRENT SCENARIO









Things do not align themselves!









DEVELOPING THE FRAMEWORK



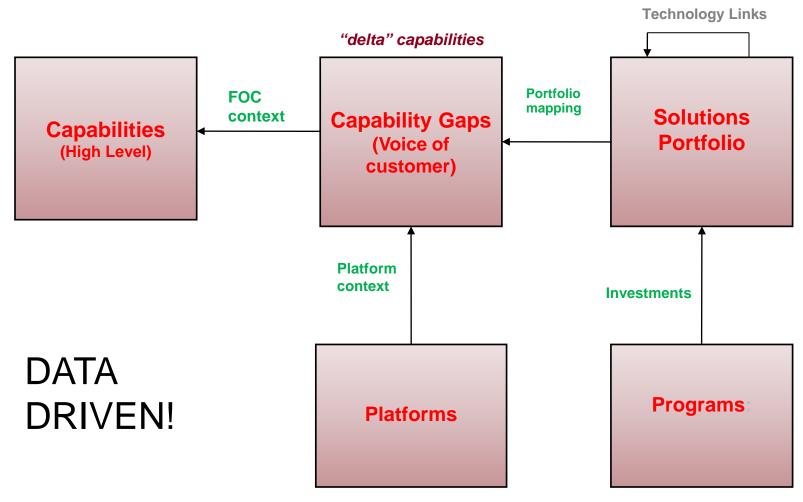
		Defining the Taxonomy		Functions			
		,					
			Provid	le context for capability needs	3		
			Plan c	apability evolution			
	/	Maintain Warfighter Needs	Prioriti Identif	y capabilities gaps			
				ize capabilities gaps			Time-align capabilities and enabling technologies
				y enabling technologies			Performance-align capabilities and enabling
		\		y common needs			technologies
			Refine	capabilities needs			
Informs S&T Portfolio Decisions		Maintain RDECOM technology/solution taxonomy	Identify	echnology evolution			Time-align technologies and prerequisite programs
				fy technology investments tify technology dependencies			Performance-align technologies and prerequisite programs
							Time-align interdependent technologies
							Performance-align interdependent technologies
		Maintain platforms taxonomy	Plan p	Plan platform evolution		ľ	
			Alloca	te capabilities to platform upg	rades		
		Capture S&T program portfolio	Plan programs				
				an programs			
TARDEC			Track	program status			
CONTRACTOR							





OUR STRUCTURED APPROACH LEADS TO STABILIZATION











		Provide context for capability needs			
		Plan capability evolution			Data Elements
		Identify capabilities gaps			
	Maintain Warfighter Needs	Prioritize capabilities gaps Identify enabling technologies		Time-align capabilities and enabling technologies Performance-align capabilities and enabling	
	Needs				CAPABILITY
		Identify common needs		technologies	VOICE OF
	\	Refine capabilities needs			CUSTOMER
		Plan technology evolution		Time-align technologies and prerequisite programs	PLATFORM
	Maintain RDECOM technology/solution taxonomy	Identify technology investments	K	Performance-align technologies and prerequisite programs	TECHNOLOGY
		Indentify technology dependencies		Time-align interdependent technologies	PROGRAMS
				Performance-align interdependent technologies	
	Maintain platforms	Plan platform evolution			_
	taxonomy	Allocate capabilities to platform upgrades			
	Conturo SST	Plan programs			
	Capture S&T program portfolio	Re-plan programs			

Track program status

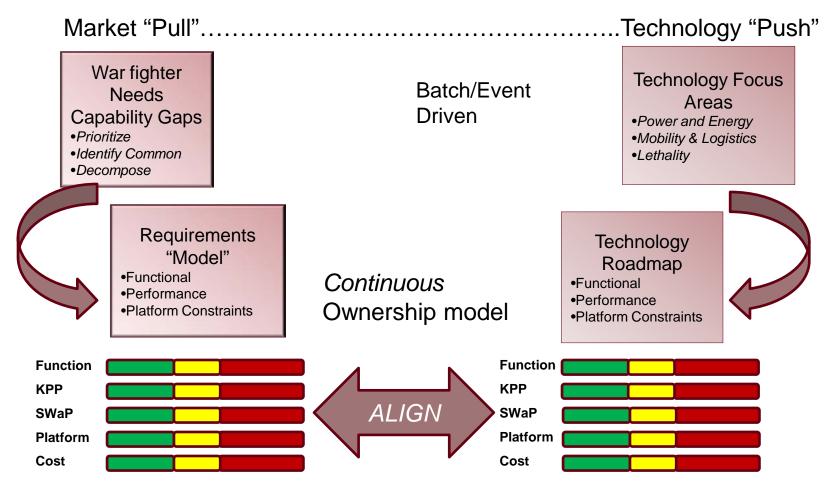


Informs S&T Portfolio Decisions



BALANCING









ROADMAP CONCEPT



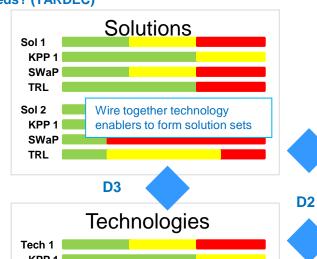
Decisions:

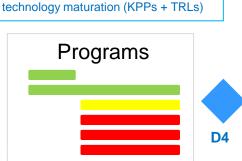
D1: What is our vehicle/platform roadmap? Which capability gaps will be filled in which increments (customer)

D2: What capability gaps will TARDEC attempt to fill? With which technologies and solution sets? (TARDEC)

D3: How will we integrate our technology enablers into high-value (multi-use) solution sets? (TARDEC)

D4: What portfolio of programs (investments) will best deliver the technologies and solutions that meet the warfighters' needs? (TARDEC)

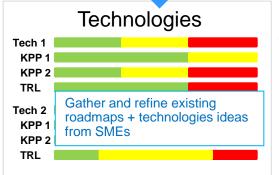


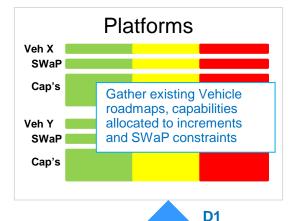


Gather summaries of existing ATOs,

identify their deliverables in terms of

SBIRs, Congressional Adds and







Identify opportunities by analyzing PM 1-N lists, TFT Tech Gaps and WFOs

Decompose capability gaps into functions and KPPs using source requirements documents (due diligence to confirm alignment)





SUMMARY



- 1. Everyone will fall into one of the alignment realms
- 2. Using non-conventional SE processes
- 3. Anything can be aligned
- 4. Structured information model ready-for-use pattern















Provide context for capability needs **Data Elements** Plan capability evolution Maintain Identify capabilities gaps Time-align capabilities and enabling Warfighter technologies **CAPABILITY** Identify enabling technologies Needs Performance-align capabilities and enabling technologies **VOICE OF** Refine capabilities needs **CUSTOMER** Time-align technologies and prerequisite **PLATFORM** Plan technology evolution programs Maintain RDECOM Performance-align technologies and Identify technology investments technology/solution prerequisite programs **TECHNOLOGY** taxonomy Time-align interdependent technologies Indentify technology dependencies **PROGRAMS** Performance-align interdependent technologies Maintain platforms Plan platform evolution taxonomy Allocate capabilities to platform upgrades Plan programs Capture S&T Re-plan programs program portfolio

Track program status



Informs

Portfolio

Decisions





Maintain Warfighter Needs Plan capability evolution

Identify capabilities gaps

Prioritize capabilities gaps

Identify common needs

Refine capabilities needs

Plan technology evolution

Identify technology investments

Indentify technology dependencies

Maintain platforms taxonomy

Maintain

RDECOM

technology/soluti on taxonomy

Allocate capabilities to platform upgrades

Capture S&T program portfolio

Plan programs

Re-plan programs

Data Elements

Time-align capabilities and enabling technologies

Performance-align capabilities and enabling technologies

CAPABILITY

VOICE OF CUSTOMER

PLATFORM

TECHNOLOGY

PROGRAMS



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Informs

Portfolio





Maintain Warfighter Needs

Maintain

RDECOM

technology/sol

Maintain platforms

taxonomy

Capture S&T program portfolio

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Provide context for capability needs

Plan capability evolution

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Data Elements

CAPABILITY

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FUNCTIONAL ARCHITECTURE



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Decisions