

SYSTEMS ENGINEERING, TEST AND EVALUATION 2003

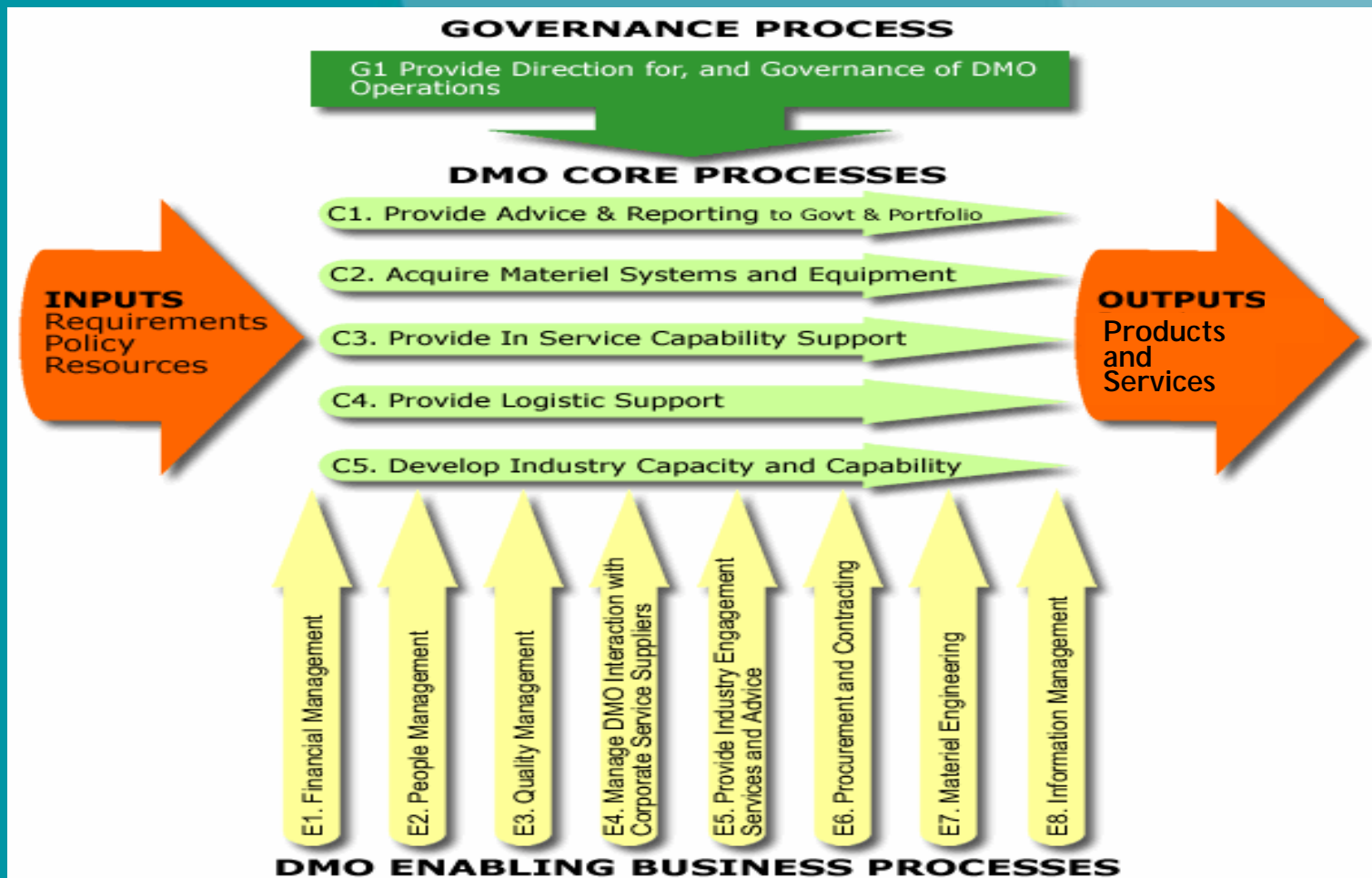
DEFENCE REFORM

IMPLEMENTING A SYSTEMS PHILOSOPHY IN THE
DEFENCE MATERIEL ORGANISATION

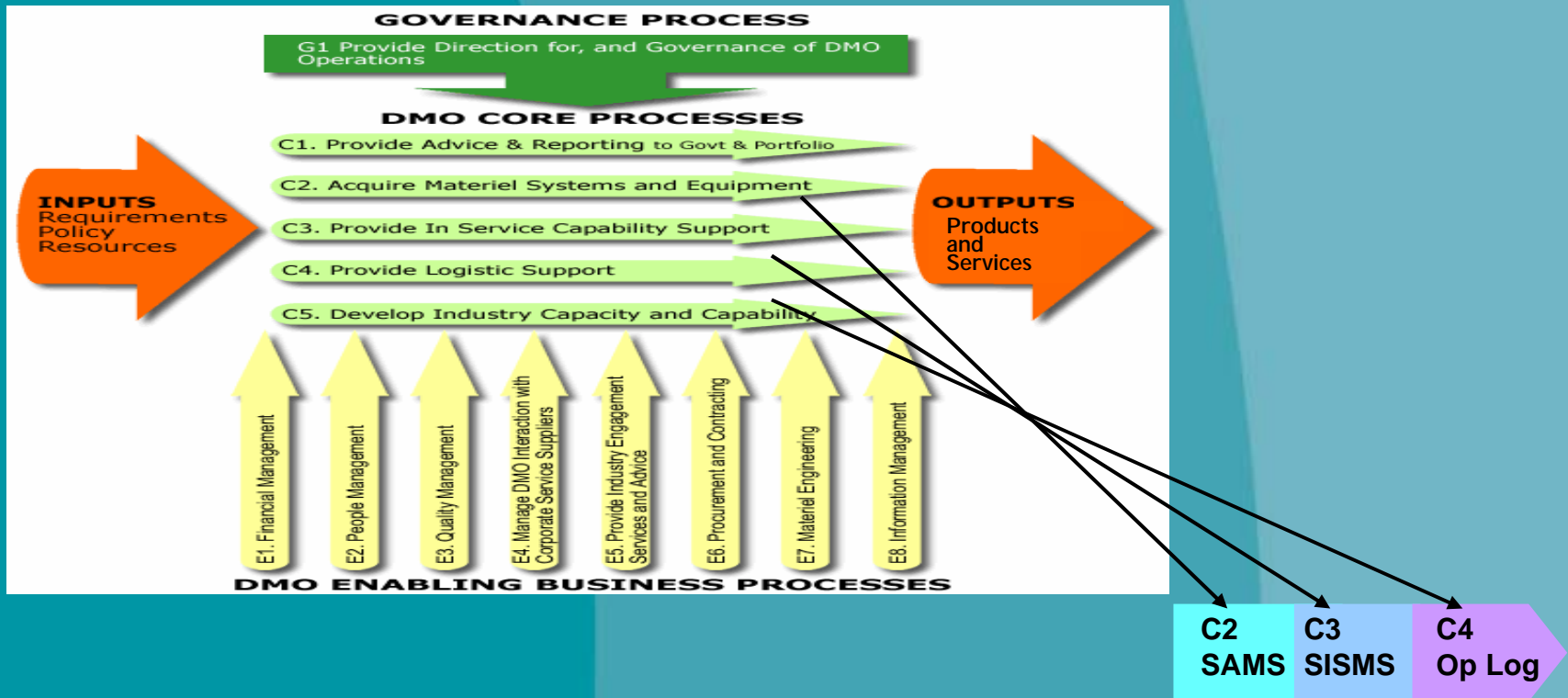
SHIREANE MCKINNIE

(HEAD ELECTRONIC SYSTEMS DIVISION)

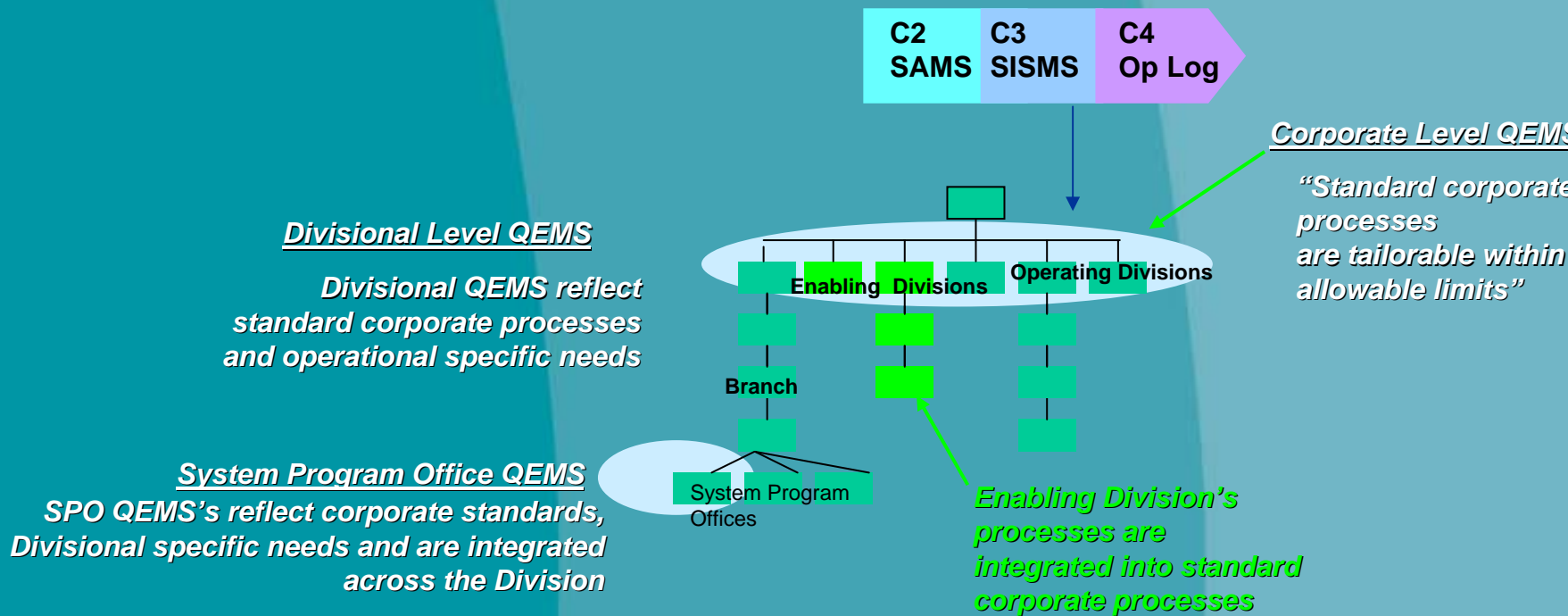
DMO business process model



SAMS and SISMS



Quality Management Systems



What is a 'Systems Philosophy'?

'An interdisciplinary approach that encompasses the entire technical effort, and evolves into and verifies an integrated and life cycle balanced set of system people, products, and process solutions that satisfy customer needs'

(EIA Standard IS-632, Systems Engineering, December 1994).

Reviews of Systems Engineering

- Auditor-General Performance Audit – Jindalee Operational Radar Network Project–1995/96
- DAO Systems Engineering Study–1998
- Cook Study on Systems Engineering Capability in DAO–1999
- Management Audit Branch Issues Paper – CAMM2 Project–2000
- Management Audit Branch Review – Mine Warfare Command Support System (MWCSS) Project– 2001

Systems Engineering Improvement Program (Phase 1)

- Requirements Engineering
 - Requirements Development
 - Requirements Management
- Engineering Management
 - Verification and Validation
 - Australian Government Systems Engineering Management Plans (SEMP)
 - Systems Review Guide for ASDEFCON(SM)
- Technical Control
 - Updated DEF(AUST) 5664 – Work Breakdown Structures (WBS)
 - WBS Application Guide for DMO.
- Systems Engineering Activities
 - DMO Systems Engineering Manual
 - SE Training Program
 - SE Mentoring Program

Aggregated Appraisal Results

	Process Management			Project Management				Engineering						Support					
GG3	0%	0%	0%	0%	0%	10%	14%	0%	0%	0%	0%	0%	0%	0%	9%	0%	0%	0%	GG3
GG2	0%	0%	9%	0%	13%	33%	22%	14%	31%	44%	25%	50%	27%	36%	36%	36%	0%	0%	GG2
GG1	45%	18%	18%	0%	22%	44%	90%	24%	39%	50%	57%	81%	53%	50%	44%	44%	0%	0%	GG1
SG3					56%			41%		56%	100%	88%	88%			56%		SG3	
SG2	45%	27%		100%	22%	61%	90%	65%		65%	86%	94%	53%	69%	63%	63%		31%	SG2
SG1	45%	27%	18%	0%	39%	50%	100%	24%	39%	72%	64%	94%	88%	59%	44%	63%	7%	0%	SG1
	OT	OPF	OPD	IPM	PP	PMC	SAM	RISK	RM	RD	TS	PI	VER	VAL	PPQA	CM	DAR	M&A	

Goals		Goal Satisfaction	
	Generic Goal		Majority of organisations appraised achieved Goal Satisfaction
	Specific Goal		Majority of organisations appraised did not achieve Goal Satisfaction
	Process Areas of Immediate Concern		Not Applicable

Results from 18 Defence Community* appraisals conducted over the period Mid 2000 - Present

*Includes Defence Industry and Department of Defence appraisal results