BRAC 2005
EDUCATION AND TRAINING JOINT CROSS-SERVICE GROUP
MEETING MINUTES OF 22 JULY 2004

The Principal Deputy Under Secretary of Defense (P&R), Mr. Abell, chaired the 20th meeting of the E&T JCSG. Attendee List is at Attachment 1.

Mr. Abell welcomed the E&T JCSG principals and asked Mr. Howlett, E&T JCSG Coordinator, to begin the briefings (briefing slides are at Attachment 2). Mr. Howlett first introduced Captain Gene Summerlin, USN, to present the Flight Training subgroup update. The members discussed the following issues:

- Military Value Scoring Plan Changes. Captain Summerlin discussed concern regarding imbalance of weights for certain Ground Training Facility questions (heavier weight than individual Managed Training Area questions (see page 2 of attachment 2)) and Environmental/QOL sections. He explained the overall relationship of weights and ranking among attributes in most areas were unchanged but a new recommended score plan would lower weights for questions in Ground Training Facilities and raise weighted values for questions in the Managed Training Areas. He also proposed JCSG accept an overall increase in weight for Environmental impact for the Graduate Fixed Wing (JSF) area. He explained that in isolated cases individual questions in one attribute may carry more weight than individual questions in another attribute, but one must view the scoring scheme in the aggregate (hard to judge specifics, need to view questions with their associated weights in the context of an entire category of questions).
  - ***The E&T JCSG members approved the subgroup's readjusted attribute and metric weights. The Flight Training section of the E&T JCSG Military Value Report will be revised to reflect these scoring plan weight adjustments. Additionally, pending ISG approval, the E&T JCSG Military Value Report will be updated to reflect the change in scope of E&T JCSG graduate-level flight training analysis. (23 July 04 the ISG approved JSF and UAV for E&T JCSG's review).***
- Each subgroup chair or representative (Maj Gen Fraser, Capt Summerlin, Col Lynes, and Mr. Harrison) reported the status of their Requests for Clarification (RFCs) and related capacity data collection issues. All agreed the Services were working hard to get the correct information to the subgroups but were mindful of the ISG timeline for E&T JCSG completion of steps in the BRAC process. It was also noted that in selected incidences, the services have submitted data to OSD, but there seems to be a process issue that delays getting the information to the JCSG. VADM Hoewing inquired as to why the Navy totals were so high. The group believed it was a combination of factors:

Navy reported activities versus installations; a number of questions were changed in transmission, and the number of activities the RFC's were sent to for new information.

Mr. Howlett provided an update on near-term E&T JCSG actions/requirements. IAW directions from the 30 June 2004 E&T JCSG meeting, he informed E&T Principals of a T&E Capacity Analysis definitions meeting to follow immediately. Mr. Howlett also announced the next update to the E&T JCSG Capacity Analysis Report was due 30 July 2004. Subsequent capacity report updates (due every two weeks) will provide a "progressive closure" for this ISG requirement until all the information required by the subgroups had been collected and entered into the Capacity Analysis Report. Then the Chair would submit the "final" Capacity Analysis Report to the ISG.

Mr. Howlett then introduced Mr. Ron Nickel who presented the Optimization Brief (Attachment 3).

The meeting concluded with a reminder that the next E&T JCSG is scheduled to meet at 1300 on 12 August 2004. ***[NOTE: the "quick-hitter" scenario tasking for the 6 August ISG meeting, prompted an additional E&T JCSG meeting to be convened at 1300 on 5 August 2004.]***

Approved:

Charles S. Abell
Principal Deputy Under Secretary of Defense (Personnel & Readiness)
Chairman, Education & Training Joint Cross-Service Group

Attachments:
1. List of Attendees, 22 July 2004
2. Briefing Slides
3. Optimization Framework: Generating Alternatives

Copies Furnished:
1. OSD BRAC Office
2. E&T JCSG Coordination Team
3. DoD IG

BRAC 2005
EDUCATION AND TRAINING JOINT CROSS-SERVICE GROUP
22 July 2004

Attendees

Members:

- Hon Charles S. Abell, Principal Deputy Under Secretary of Defense (Personnel &Readiness) Chair
- VADM Gerry Hoewing, USN, Chief, Naval Personnel, N1
- MG Pete Sutton, USAF, (AF/DPL)
- MG Buford Blount, USA, Deputy G-3
- BGEN Tom Maffey, USA, JCS VDJ-7
- Col Jeff Bearor, USMC, Chief of Staff, Training and Education Command

Others:

- Dr. Paul Mayberry, Deputy Under Secretary of Defense for Readiness
- Mr. Dan Gardner, ODUSD(R) Readiness & Training Policy & Programs
- Mr. Bob Howlett, E&T JCSG Coordination Team
- Col Nancy Weaver, USAF, E&T JCSG Coordination Team
- Maj Gen William Fraser III, USAF, AETC/DO
- Col Jimmie Simmons, USAF, AETC/DOR
- Mr. Bob Howlett, E&T JCSG Coordination Team
- Col James Briggs, USAF, AETC/DOO
- Col Jerry Lynes, USMC, Division Chief, Joint Education & Doctrine, J-7
- CAPT Cathy Osman, USN, J7/JEDETD/JETB
- CAPT Gene Summerlin, USN, DON IAT
- CPT William Taylor, USA, PDE Subgroup
- CPT Jered Helwig, USA, PDOSD
- CPT Richard Harrison, USA, AIG/G3
- Mr. Ron Nickel, DON IAT Contract Support
- Mr. Bob Harrison, DAMO-TR/E&T
- Ms. Beth Schaefer, DOD/IG
- Mr. Brian Buzzell, OSD BRAC Contract Support
- Ms. Adrian Ruppert, E&T JCSG Coordination Team

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Education &Training Joint Cross Service Group

E&T JCSG Principals Meeting
22 July 2004

Mr. Charles Abell
Chairman, E&T JCSG

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FT SUBGROUP

Status of Requests for Clarification (RFC)

	RFC	RFCs Closed	RFCs Open	# ≤ 2 weeks	# 2 to 3 weeks	# over 4 weeks	Actions Taken
Army	10		10	0	1	9	Awaiting Response in the DB update.
Navy / USMC	31	4	27	1	13	13	Awaiting Response in the DB update.
Air Force	26	6	20	1	11	8	Awaiting Response in the DB update.
DoD	0	0	0	0	0	0	
Total	67	10	57	2	25	30	

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Military Value Scoring Changes

Old

Function/Subfunction	Attribute Weights					
	Airfield Capacity	Weather	Environment	Quality of Life	Managed Training Areas	Ground Training Facilities
Undergraduate Rotary Wing	24.15	13.95	11.35	9.90	26.85	13.80
Undergraduate Fixed Wing	23.75	14.90	12.90	10.30	24.45	13.70
Undergraduate NAV / NFO	19.80	13.30	12.50	10.30	25.85	18.25
Graduate Fixed Wing (JSF)	22.15	13.70	12.50	10.30	25.65	15.70
UAV	20.45	16.00	12.90	10.30	25.45	14.90

New

Function/Subfunction	Attribute Weights					
	Airfield Capacity	Weather	Environment	Quality of Life	Managed Training Areas	Ground Training Facilities
Undergraduate Rotary Wing	24.15	13.95	11.35	9.90	27.55	13.10
Undergraduate Fixed Wing	23.75	14.90	12.90	10.30	25.15	13.00
Undergraduate NAV / NFO	19.80	13.30	12.50	10.30	26.55	17.55
Graduate Fixed Wing (JSF)	22.50	11.00	15.55	11.10	27.05	12.80
UAV	20.45	16.00	12.90	10.30	26.15	14.20

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MV Scoring Changes: Rationale

- All functions/subfunctions
  - Reduced importance of Ground Training Facilities (classrooms & simulator bays) which are reconstitutable assets
  - Increased importance of Managed Training Areas (airspace, OLFs, ranges) which are primarily non-reconstitutable assets
  - Adjusted weights of individual questions to achieve more logical and explainable ranking
    - E.g., highest weighted questions now address runways, airspace, and weather; not classrooms
- Graduate Fixed Wing (JSF)
  - Increase importance of Environment and QOL
    - Larger engine than in trainer aircraft (more noise and pollutants)
  - Decreased importance of Weather
    - Less importance than for UFT

PDE SUBGROUP

Status of Requests for Clarification (RFC)

	RFC	RFCs Closed	RFCs Open	# ≤ 2 weeks	# 2 to 3 weeks	# over 4 weeks	Actions Taken
Army	6	1	5			5	Awaiting Army Response.
Navy / USMC	5	1	4		3	1	Awaiting Navy/USMC Response.
Air Force	8	5	3		1	2	Awaiting AF Response.
DoD	10	0	10			10	
Total	29	7	22		4	18	

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SST SUBGROUP

Status of Requests for Clarification (RFC)

	RFC	RFCs Closed	RFCs Open	# ≤ 2 weeks	# 2 to 3 weeks	# over 4 weeks	Actions Taken
Army	290	203	87			87	Army Tabs engaged. Calling daily.
Navy / USMC	278	92	186		4	182	Team calling daily.
Air Force	159	155	4	4			
DoD	0						
Total	727	450	277	4	4	269	

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Ranges SUBGROUP

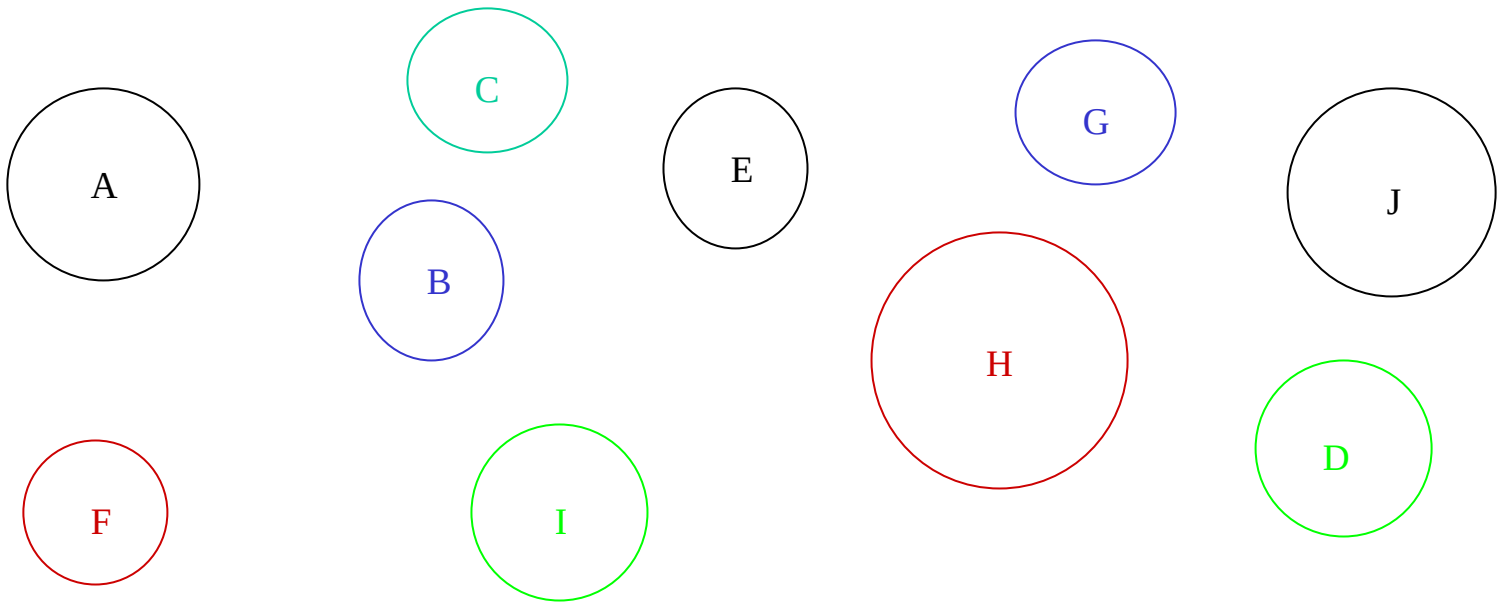
Status of Requests for Clarification (RFC)

	RFC	RFCs Closed	RFCs Open	# ≤ 2 weeks	# 2 to 3 weeks	# over 4 weeks	Actions Taken
Army	116	16	100			100	Services Responding.
Navy / USMC	102	22	80			80	Services Responding.
Air Force	108	0	108			108	Services Responding.
DoD	0	0	0			N/A	
Total	326	38	288				

Proposed Optimization Framework: Generating Alternatives

DON IAT

Optimization framework: filter alternatives

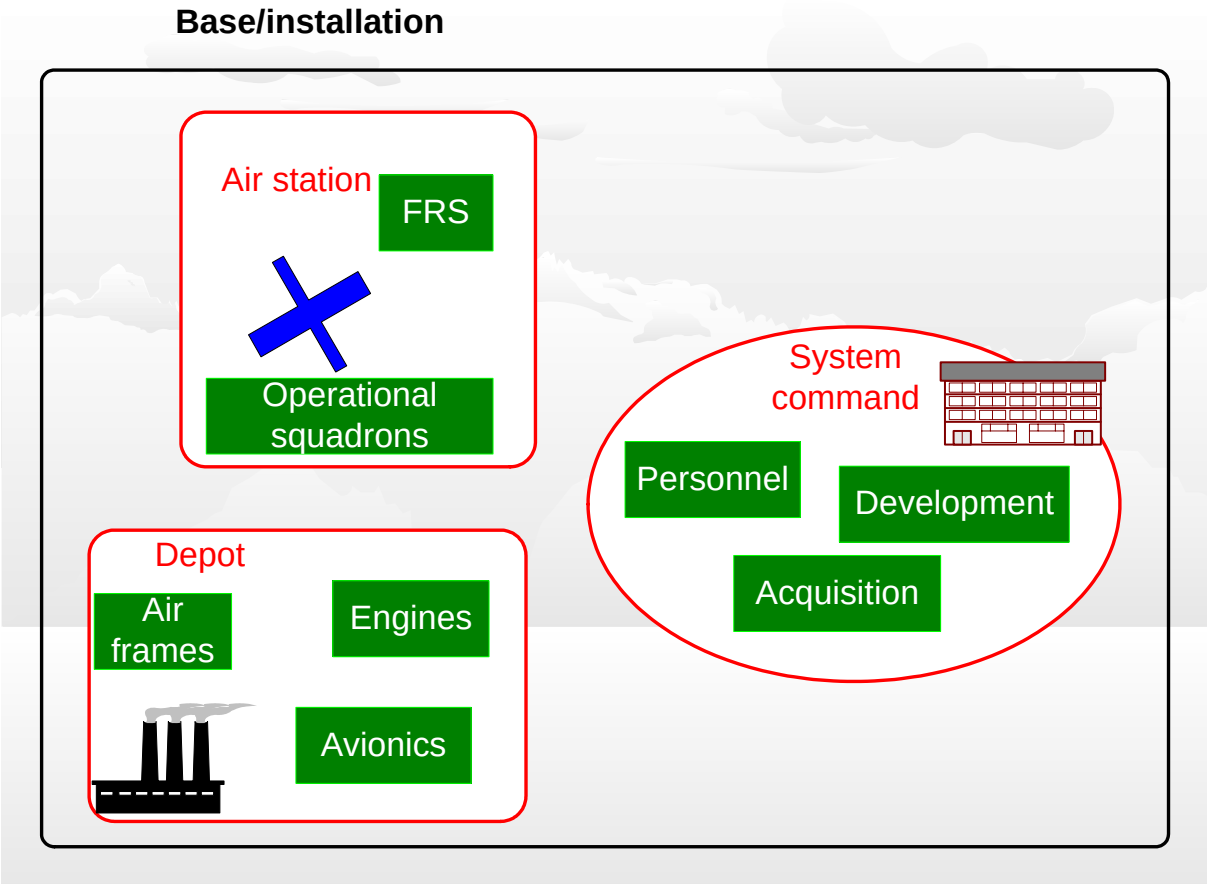


- Example: Given 10 activities, there are 175 alternatives that close 1, 2, or 3 activities
- Find a subset of the 175 possible alternatives for scenario development and in-depth analysis

Outline

- Background
- Optimization methods
- Method choices
- Example
- Optimization model inputs and outputs

Definitions



- Activity: the basic organizational unit
- Functions: partition of the activity

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Optimization approach

- Notionally:

  Max (*total retained MilVal) - ρ (retained "resources")*

  Subject to:

  retained capacity $\geq$ required capacity (each type)

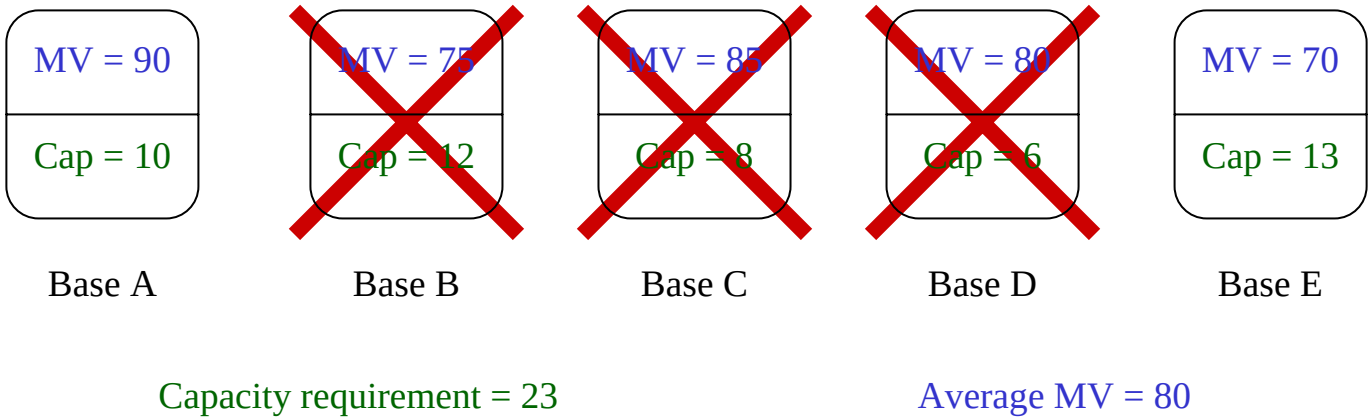
  satisfy policy imperatives

- Vary ρ to show different trade-offs
- Defined by JCSG:
  - Military Value
  - Resources
  - Policy imperatives

Optimization alternatives

Size reduction focus	Military value **focus**	
	Activity	Function
reducing activities	**Method 1**	**Method 3**
reducing resource capacity	**Method 2**	**Method 4**

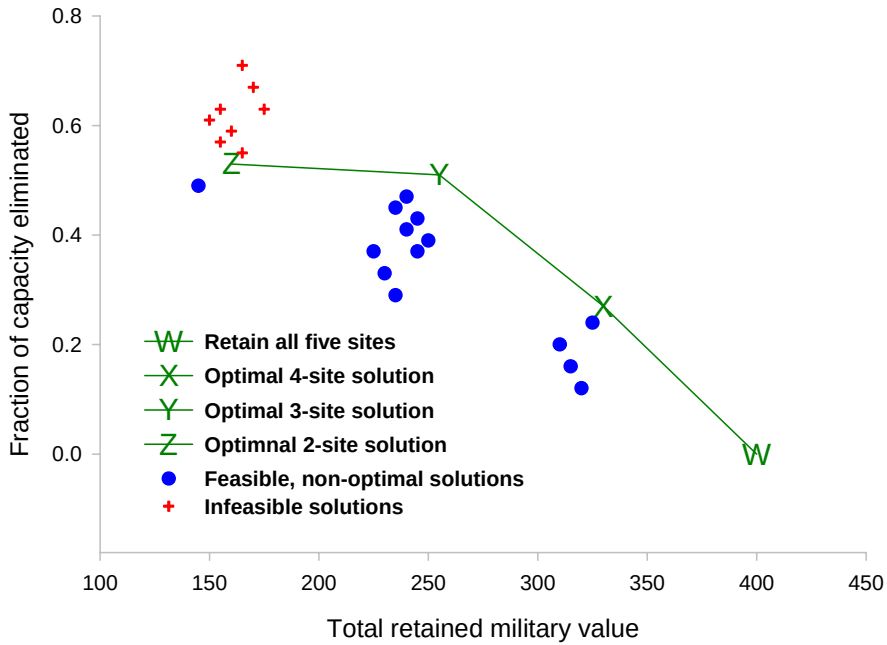
DoN BRAC 95 methodology



- Objective:
  - Minimize excess capacity
- Subject to:
  - Maintain or improve average MV
  - Any other needed constraints

Generating alternatives

- Explore trade-offs between:
  - Enhancing military value
  - Reducing infrastructure
- Enhance military value:
  - Maximize total retained military value
    - Activities
    - Functions



- Reduce infrastructure:
  - Penalize number of activities (functions) retained
  - Penalize retention of excess resources
- Generate 1st, 2nd, and 3rd best solutions

Method choice

- Choice of method is a ***policy*** decision
  - Mathematically very similar
- Many alternatives nested within the framework
  - Maximizing average military value results from constraint on number of open sites
  - DON BRAC ’95 approach is a special case of activity-based military value with goal of minimizing capacity
- Rank-order methods are a simplification of the different methods
  - But with restrictions on the alternatives considered

Hypothetical example

- Example illustrates the effects of different approaches
- Caution
  - Results are data-specific. Different values may lead to different conclusions
  - Decision should be based on understanding of issues
  - Example does not exhibit all capabilities

Depot allocations

Activity	Air frames	Tanks	Turbines	Electronics
Alpha	14		40	500
Bravo	10		84	405
Charlie	16		88	395
Delta		18	43	1,210
Echo		5	30	450
Foxtrot		9	15	440
Golf				1,100
Requirement	40	32	300	4,500
Max production	97	64	757	21,868

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Depot resources

Activity	Test ranges	Fabrication shops	Hangars	Test facilities
Alpha	2	1.2	12	0.9
Bravo	1	0.9	7	1.3
Charlie	1	1.6	3	2.3
Delta	2	2.1	0	1.7
Echo	1	3.0	0	0.7
Foxtrot	2	1.7	0	2.4
Golf	0	0	0	1.8

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Resource requirements for production

Product	Test ranges	Fabrication shops	Hangars	Test facilities
Air frames	0.02	0.01	0.37	0.0023
Tanks	0.01	0.059	0	0.0047
Turbines	0	0.0067	0	0.0030
Electronics	0	0	0	0.0002

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Depot and function military values

Activity	Activity MV	Air frames MV	Tanks MV	Turbines MV	Electronics MV
Alpha	62	82		35	57
Bravo	61	50		62	89
Charlie	67	66		81	80
Delta	72		75	73	64
Echo	63		93	44	74
Foxtrot	75		54	54	85
Golf	55				92
Averages	65	67.13	74.00	62.28	79.30

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Normalized and scaled functional military values

Activity	Air frames MV	Tanks MV	Turbines MV	Electronics MV
Alpha	200		43	62
Bravo	122		77	97
Charlie	161		100	87
Delta		161	90	70
Echo		200	54	80
Foxtrot		116	67	92
Golf				100

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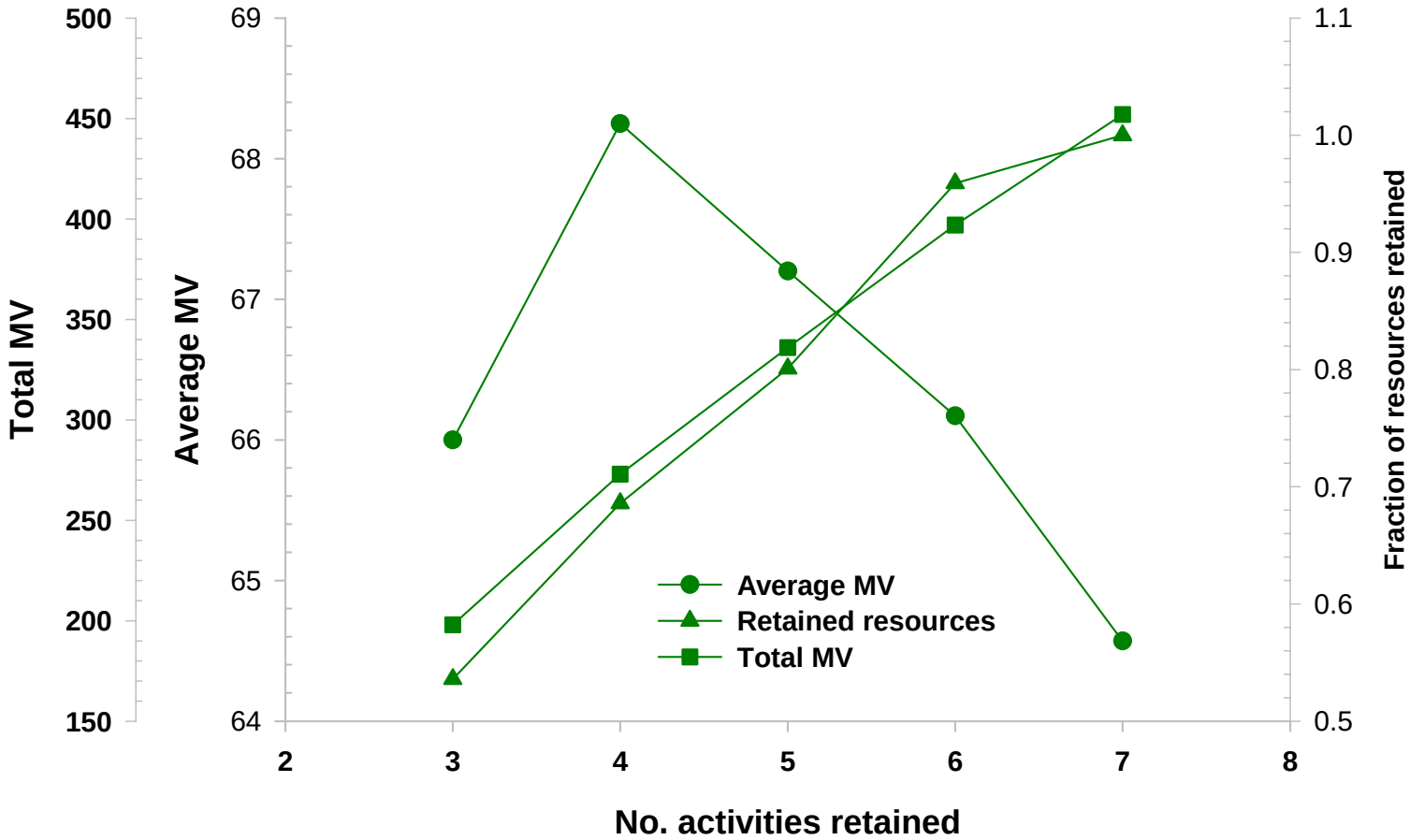
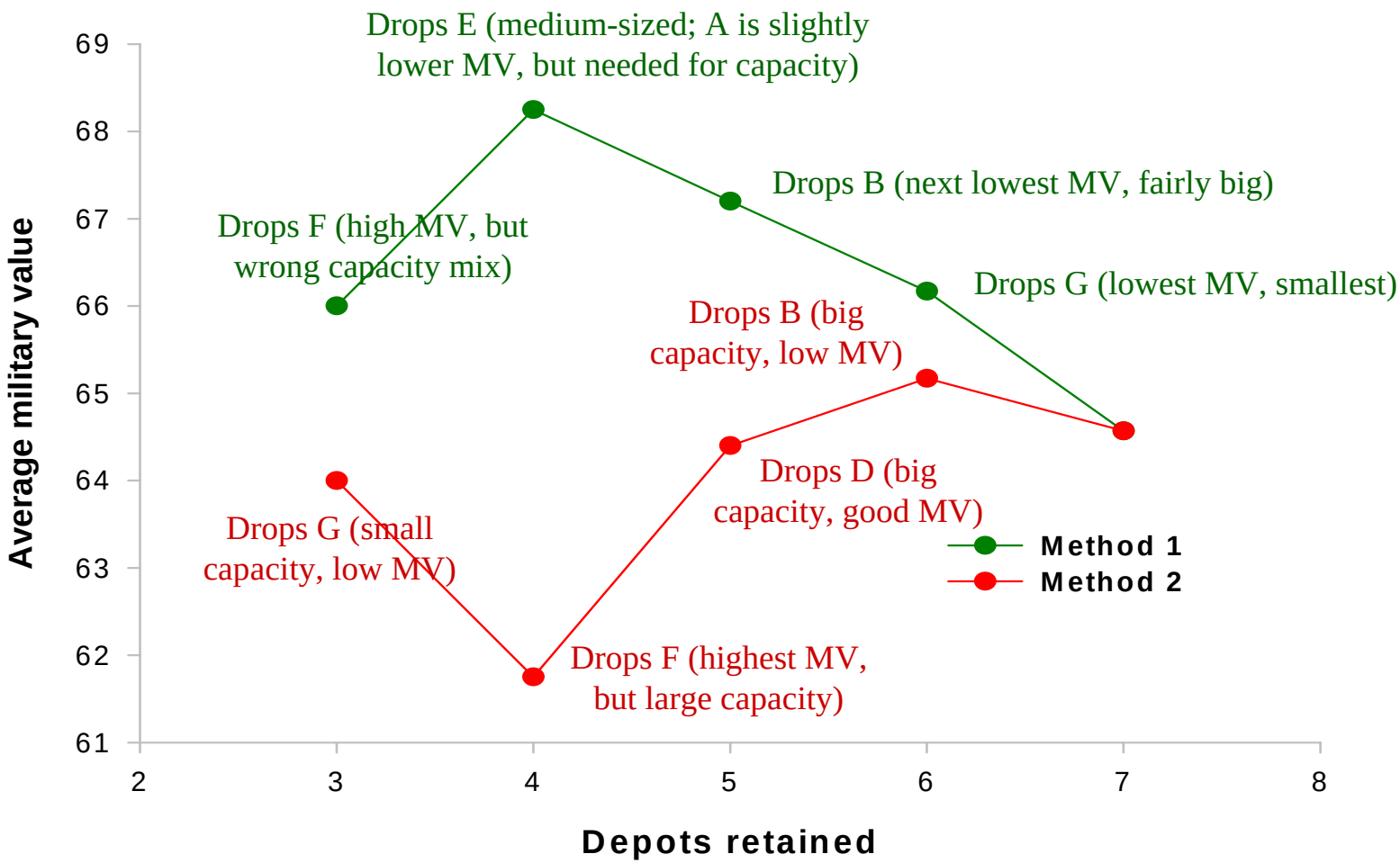
Max total retained activity MV (Method 1)

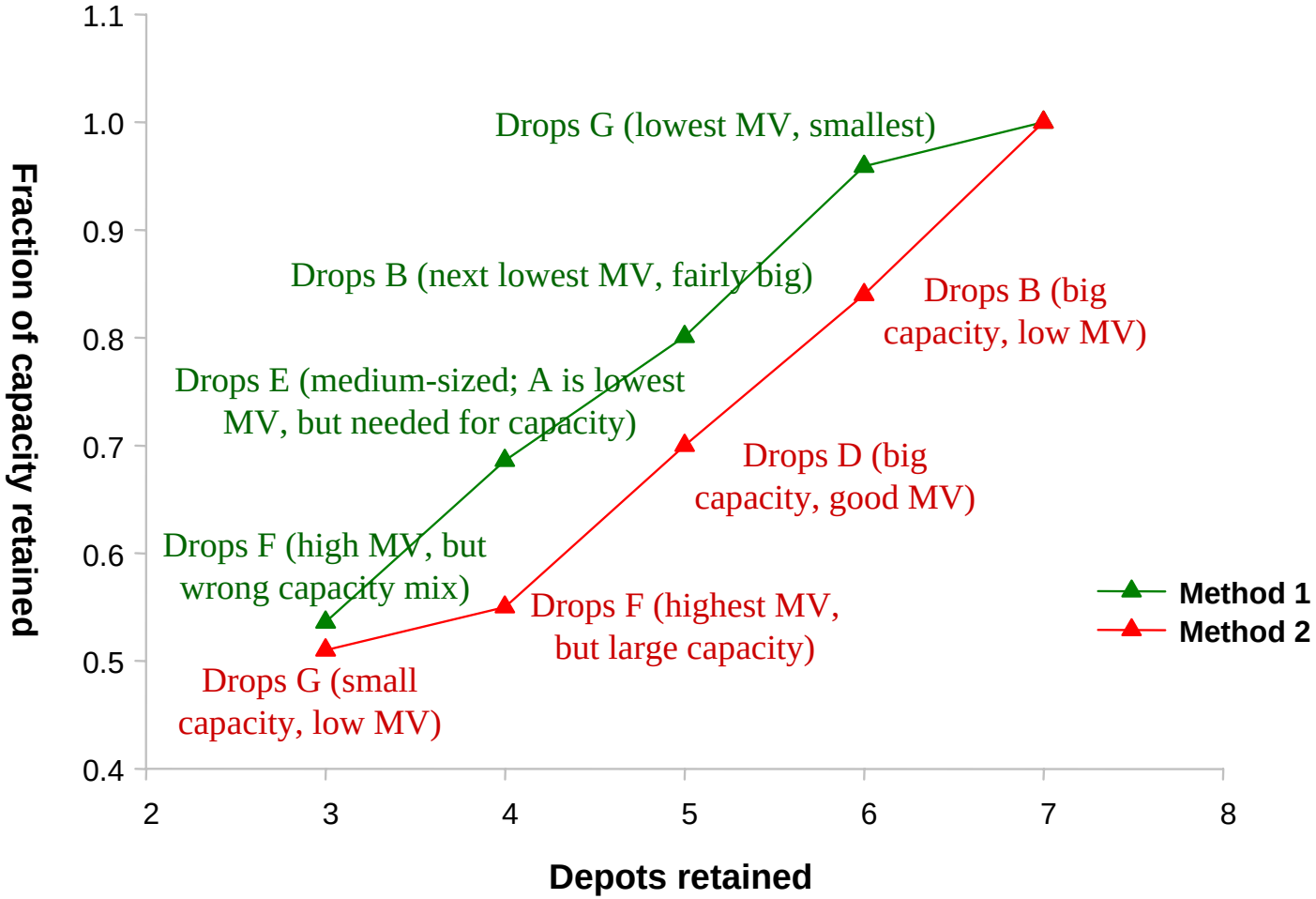
(Penalize number of activities retained)



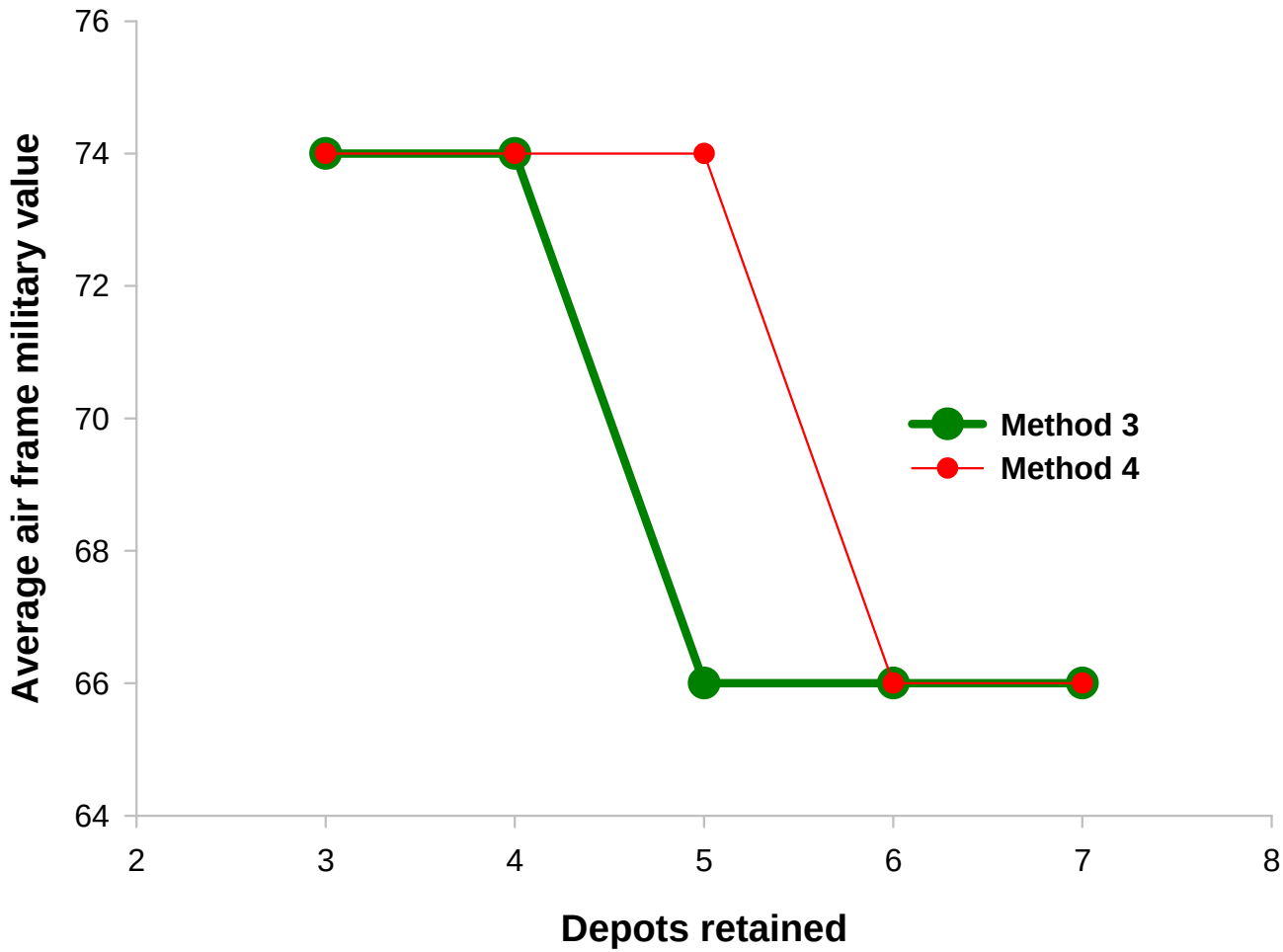
Methods 1 & 2: average MV



Methods 1 & 2: capacity retained



Methods 3 & 4: air frames



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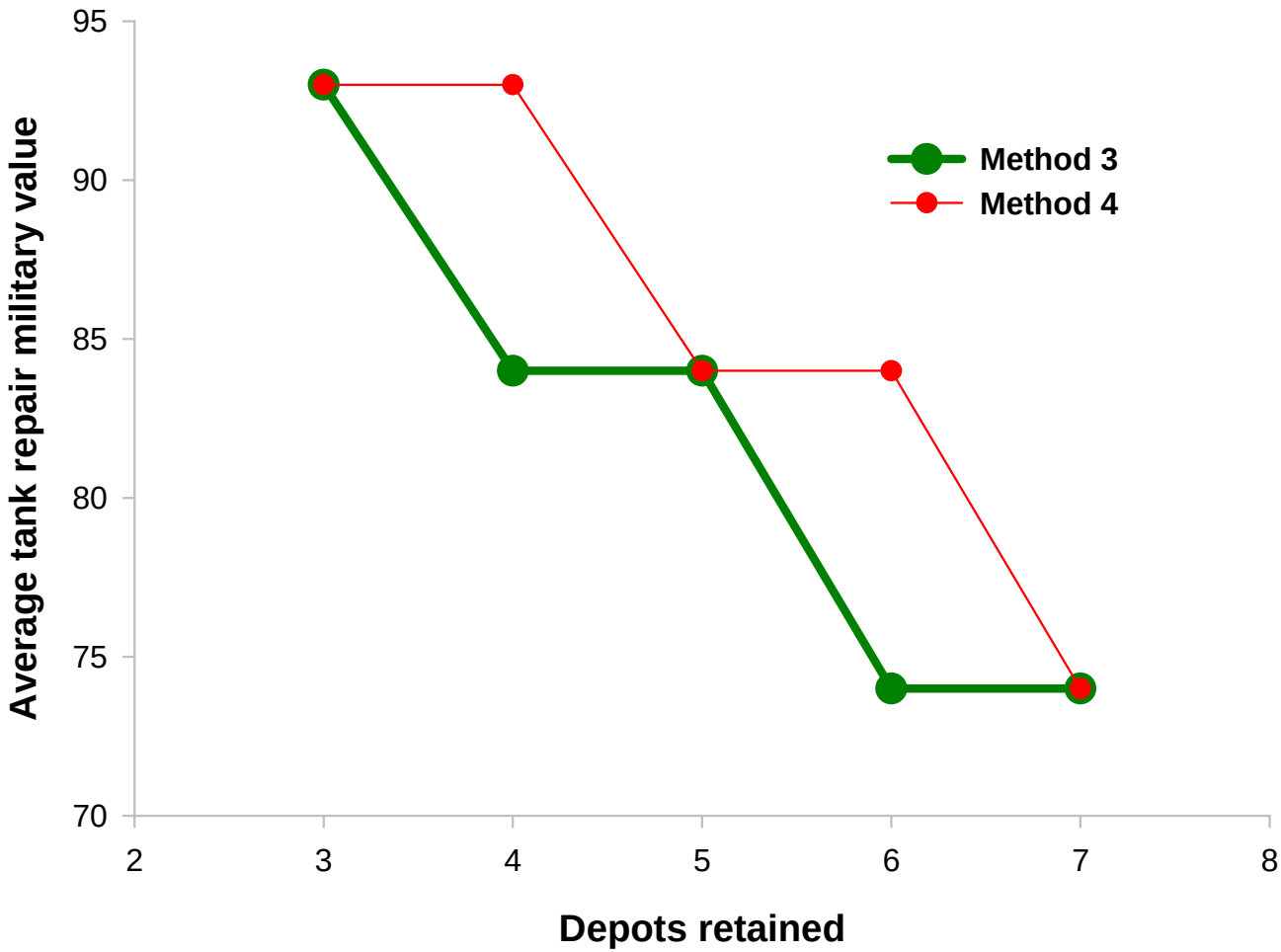
Methods 3 & 4: tank repair



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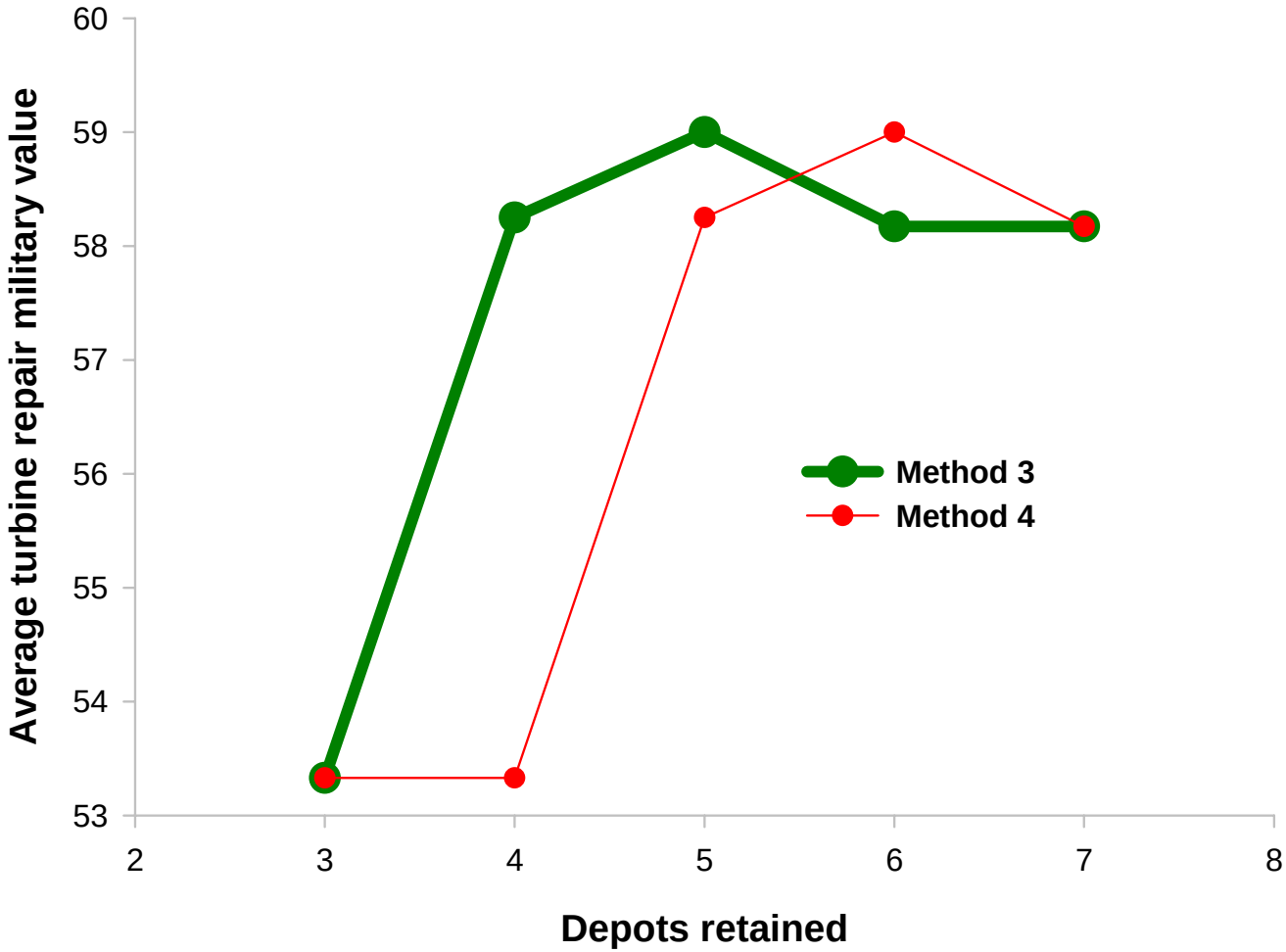
Methods 3 & 4: turbine repair



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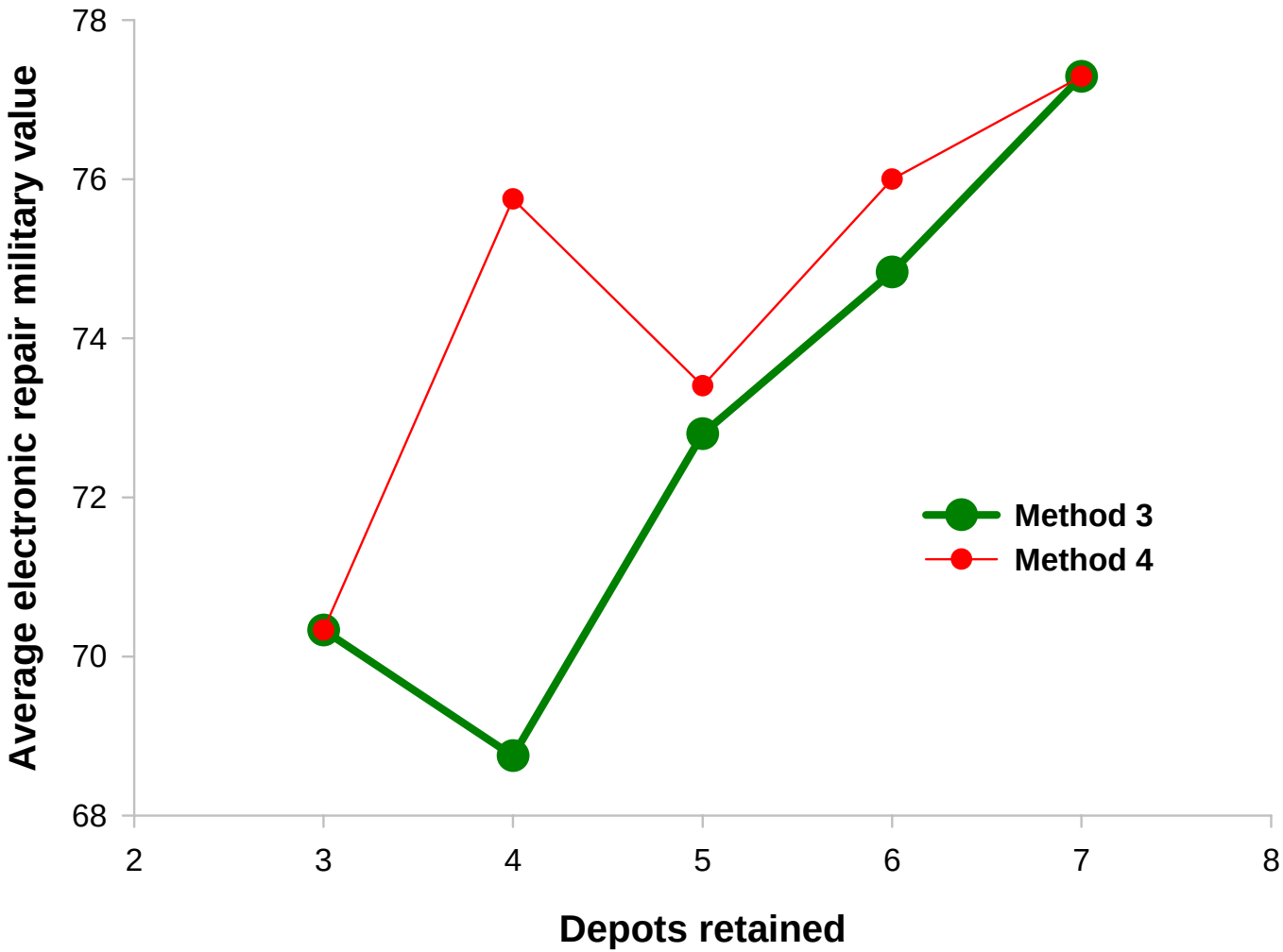
Methods 3 & 4: electronics



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Depot expansion example

- Allow resource expansion
- Start from method 4 three-depot solution
- Use same settings, but allow expansion
- Obtain a two-depot solution

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Resource expansion

Activity	Test ranges	Fabrication shops	Hangars	Test facilities
Alpha	0	0.1	3	0.5
Bravo	0	0.1	2	0.6
Charlie	0	0.1	1	0.7
Delta	0	0.2	0	0.4
Echo	0	0.3	0	0.6
Foxtrot	0	0.1	0	0.6
Golf	0	0	0	0.4

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Allow expansion

Average FV and capacity reduction

	No expansion	Expansion
Product	A, C, and E	A and E
Air frames	74.00	82.00
Tanks	93.00	93.00
Turbines	53.33	39.50
Electronics	70.33	65.50
Retained capacity	0.51	0.40

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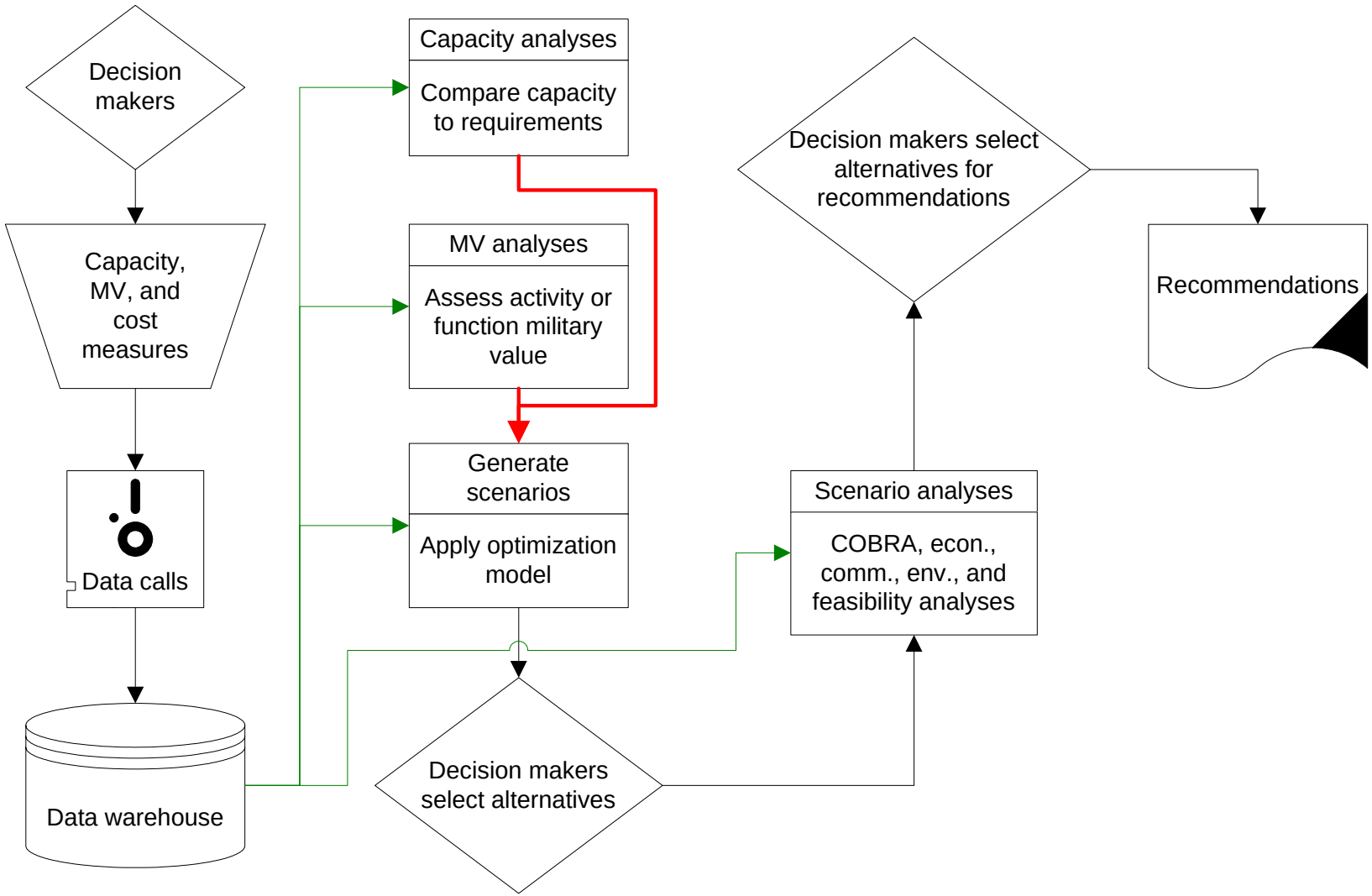
Data flow


Decision makers
Capacity, MV, and cost measures
Data calls
Data warehouse
Capacity analyses
Compare capacity to requirements
MV analyses
Assess activity or function military value
Generate scenarios
Apply optimization model
Decision makers select alternatives
Scenario analyses
COBRA, econ., comm., env., and feasibility analyses
Decision makers select alternatives for recommendations
Recommendations

Optimization model inputs

Model element	JCSG Input
Overall structure	Structures and relationships to be modeled
Total capacity required	Required capacity type and quantity • Commodities/functions • Dimensions (e.g. workload, facility) • Routine/Surge from Forces Structure Plan?
Capacity available by site	Capacity types and quantity • Parallel required capacity
Military value	Values • Activity or function? • Weighting between functions/commodities?
Objective functions (multiple runs?)	Size definition • Site, resources, or both • Expansion?
Constraints	Policy imperatives and other restrictions on solutions

Optimization model output

- Output of each model run is a *possible scenario*

Configuration data	Configuration characteristics
Sites retained	Total retained Military Value
Site/functions retained	Average retained Military Value
Workload assignment	Size reduction