



DRDC
RDDC

Connections North Canada Roundup Panel #1

Defence Research Development Canada
Centre for Operational Research and Analysis

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Canada 



Centre for Operational Research and Analysis

- Role

- The role of the Centre for Operational Research and Analysis (CORA) is to enhance Canada's defence and security posture by providing Operational Research and Strategic Analysis to the Department of National Defence, the Canadian Armed Forces, and Canadian security partners, in peacetime, wartime, within Canada or deployed, and at all security levels.

- Vision:

- As a recognized trusted advisor, CORA enables a Department of National Defence and Canadian Armed Forces whose strategic and operational decisions are founded on unbiased, scientific evidence-based advice.



Field of Expertise

- Operational Research:
 - physical or mathematical analysis, statistics and modeling and simulation of military operations to discover the principal and risk factors and to facilitate the choice of better options and the optimal use of resources
- Strategic Analysis:
 - scientific methods of social and historical analysis in order to develop large-scale studies of interest to Canadian strategy, dealing with economic, geopolitical, diplomatic, political, technological and security developments



Centre for Operations Research and Analysis

- Approximately 100 scientific/technical staff:
- Mostly quantitative OR specialists, with an increasing number of data scientists
- Roughly 20% are strategic analysts
- A few other specialists (full-time engineer, open-source intelligence analyst, etc)

CORA

Maritime and Air
Systems

Land and Operational
Commands

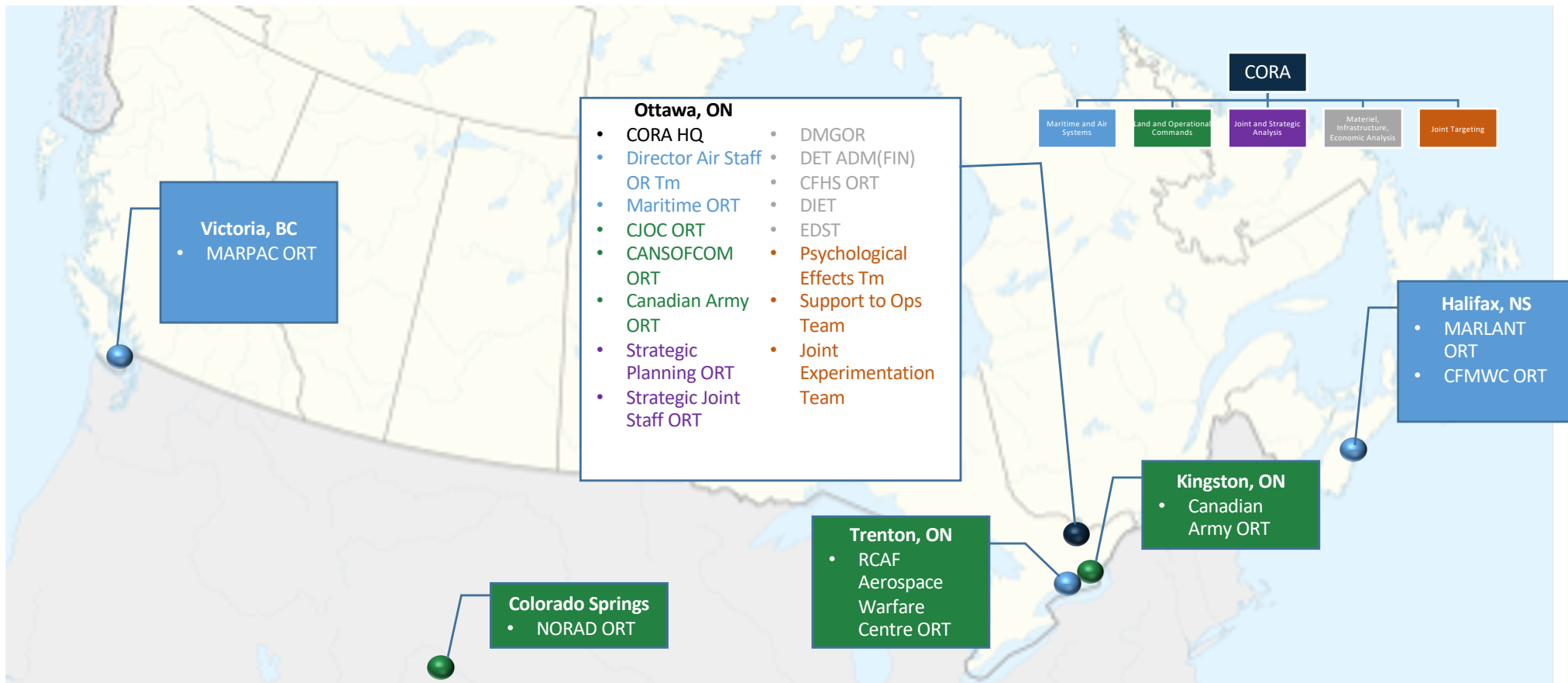
Joint and Strategic
Analysis

Materiel,
Infrastructure,
Economic Analysis

Joint Targeting

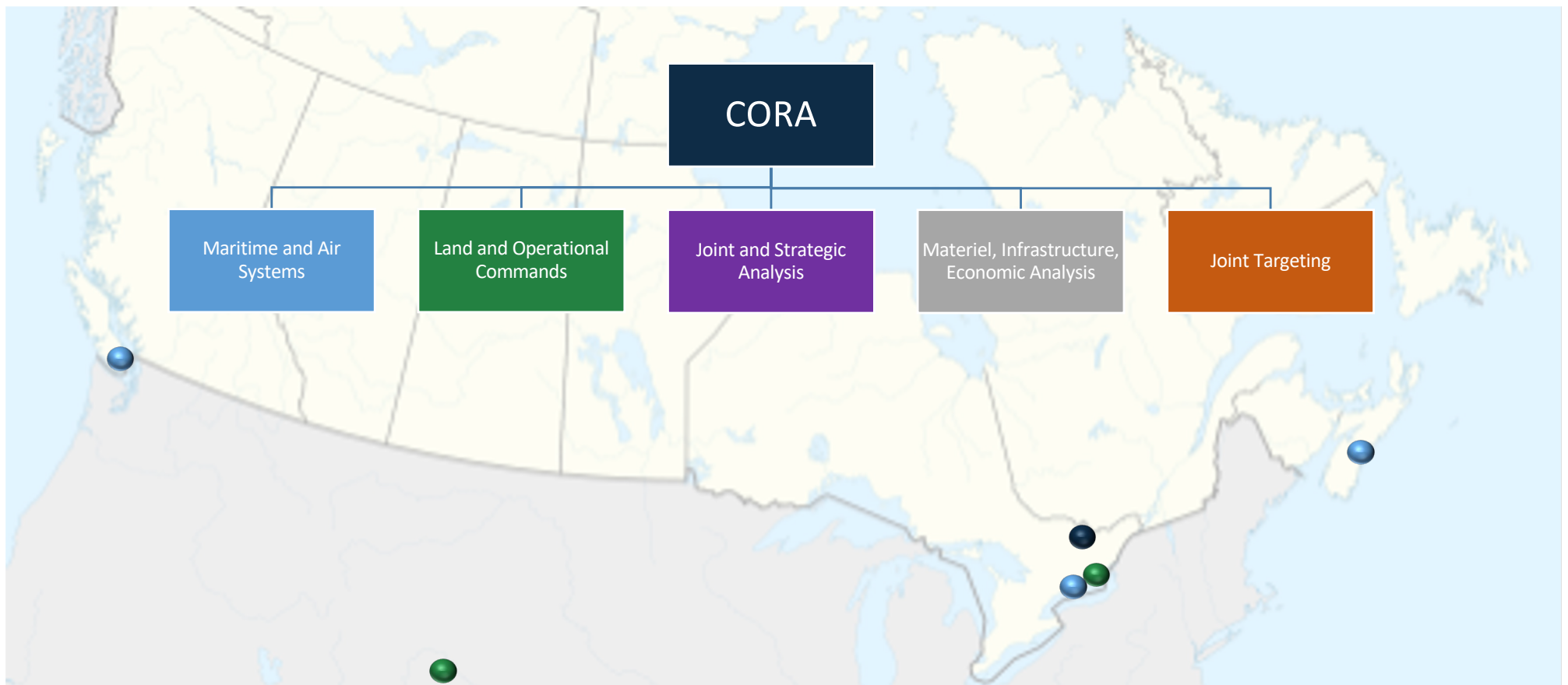


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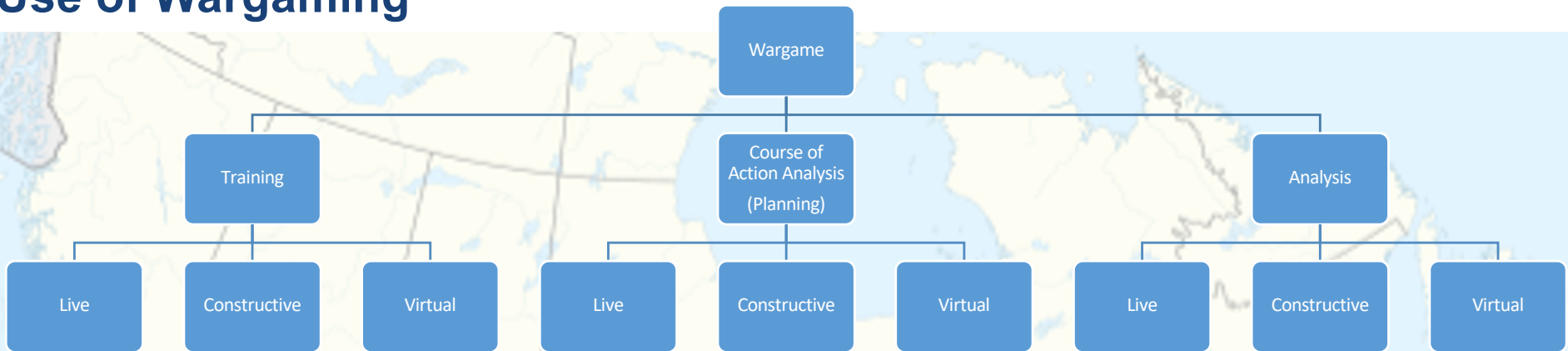


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Use of Wargaming



Simulation

A method for implementing a model over time (DTB 31983)

Model

A physical, mathematical, or conceptual representation of a system, entity, phenomenon, or process. (DTB 32083)

Types of simulations

Live Simulation - In the taxonomy of simulation, a type of simulation involving real people operating real systems. (DTB 32081)

Virtual Simulation - In the taxonomy of simulation, a type of simulation involving real people operating simulated systems. (DTB 31990)

Constructive Simulation - In the taxonomy of simulation, a type of simulation involving simulated people operating simulated systems. (DTB 32079)



Wargame Development/Execution

- Development of Tabletop Wargames to support Capability Based Planning;
 - seminar wargames to generate operational-level COAs and capability insights;
 - generate tactical level vignettes using the seminar game outputs and run them through M&S support to explore if the COAs/capabilities insights are valid and to conduct options analysis;
 - the outcome being to inform the Chief of Force Development's decision about the future force
- The Technical Cooperation Program-Aerospace-Technical Panel 11 (TTCP-AER-TP11) SCRUM series;
 - Conduct of simulation supported scenarios to develop and test concepts
- Development of capabilities to support Defence of North America upgrades