Welcome to the

Defence Supply Chain Business Acumen Knowledge Blitz

18 June 2024

MATERIEL

National Defence | Défense nationale

Welcome & Land Acknowledgement

Master of Ceremonies

Denis Forest

Lead

Materiel Management Practitioner Professionalization Project (MMP3)

Administration Points

- Emergency Exits
- Washrooms
- Morning Break and Lunch
- Phones on silent please
- Leaving the room

Land Acknowledgement

At this moment I would like to acknowledge that we all live, work and play on First Nations, Inuit or Métis territory in what we know as Canada. Because I am in Ottawa, I am joining from the traditional unceded and unsurrendered territory of the Algonquin Anishinaabe people. I thank them for their past and present stewardship of this land that I enjoy to nourish and protect me.

I welcome you to discover something about the territory you are joining from. By educating ourselves, we honour our commitment to reconciliation.

Agenda

Hour	Topic
0900	Welcome & Land Acknowledgement
0905	Opening Remarks
0915	Module 1 Government of Canada Direction
0945	Module 2 Departmental Policies
1015	Break
1030	Module 3 DSC Business Execution
1230	Lunch
1330	Module 4 DSC Analytics
1500	Break
1515	Module 5 Reporting
1545	Closing Remarks

Feedback Form

Your feedback is much appreciated and helps to improve future professionalization events

Link to Feedback Form

Sign in using your Office 365 ECN account login

Attestation Form

Please complete the form to have your Training record updated in HRMS/PeopleSoft

Link to Attestation Form

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Opening Remarks

Diogo Brandao

Director Supply Chain Operations

Module 1

Government of Canada Direction

Bronwynn Guymer

Section Head

DMPP 7

Learning objectives

Module 1
Government of Canada Direction

At the end of this module, you will be able to:

- Identify the Legislative Framework and Policies governing Materiel Management
- Describe the Governmental Expectations for the DSC
- Explain the purpose of these policies
- Discuss DND/CAF role in the Whole of Government, its structure and Strategic Environment

Module 1 - Government of Canada Direction

Main Topics:

1. Legislative Framework
2. Governmental Expectations
3. Purpose
4. Additional Context

Activity 1-1

Join at slido.com
Event code: DSC

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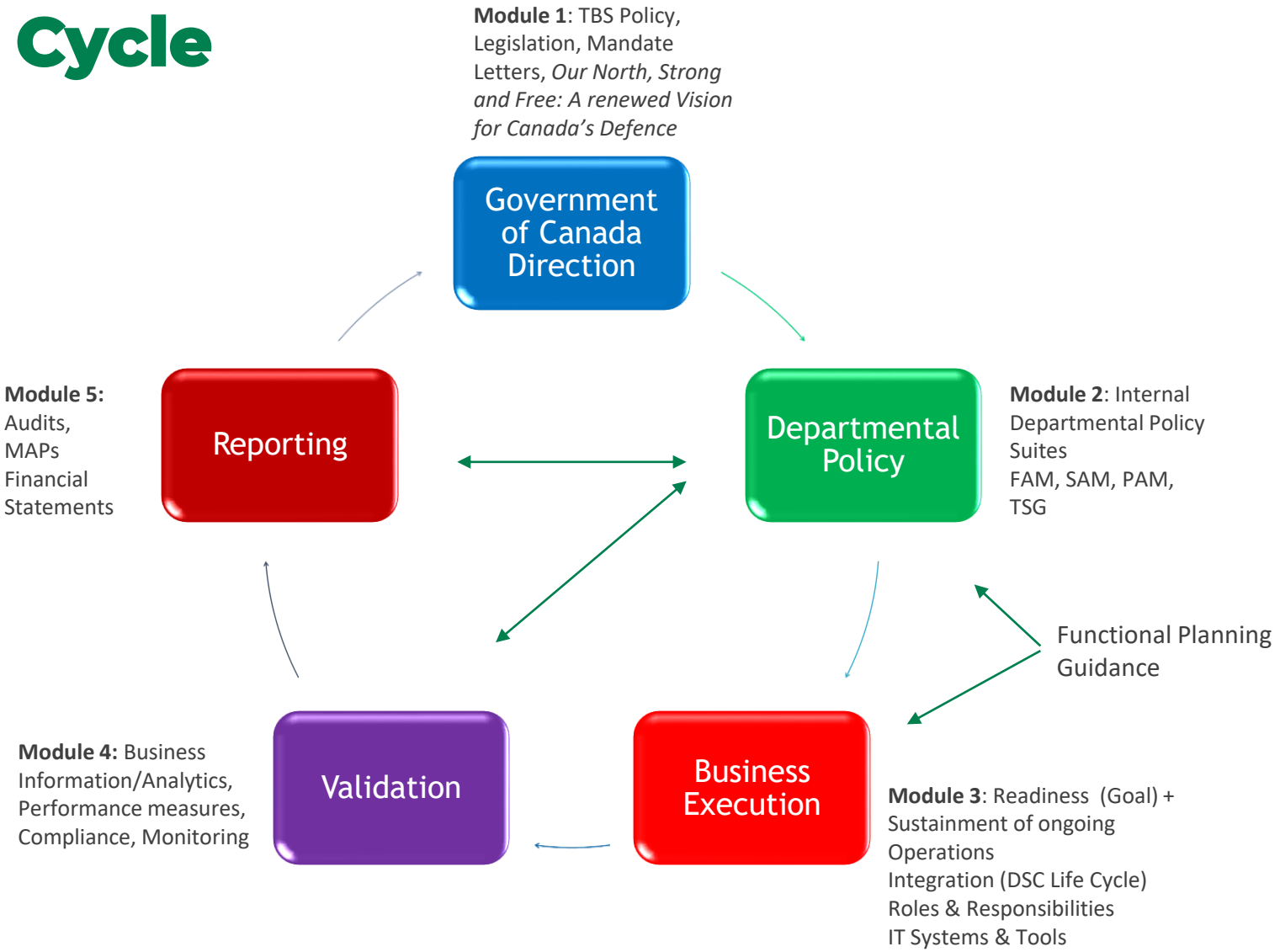
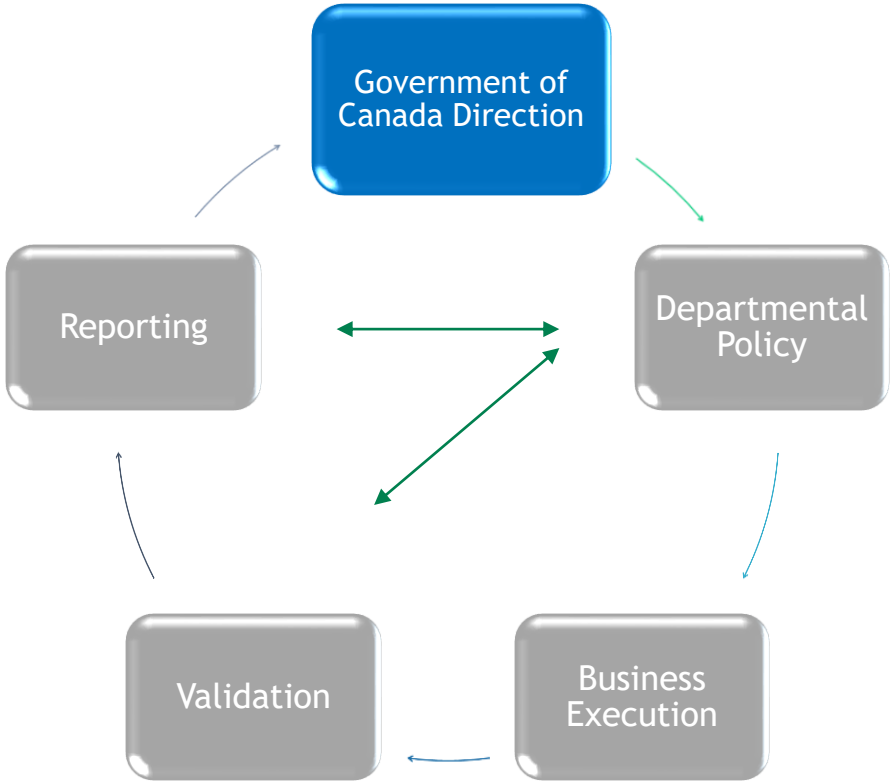
The Cycle

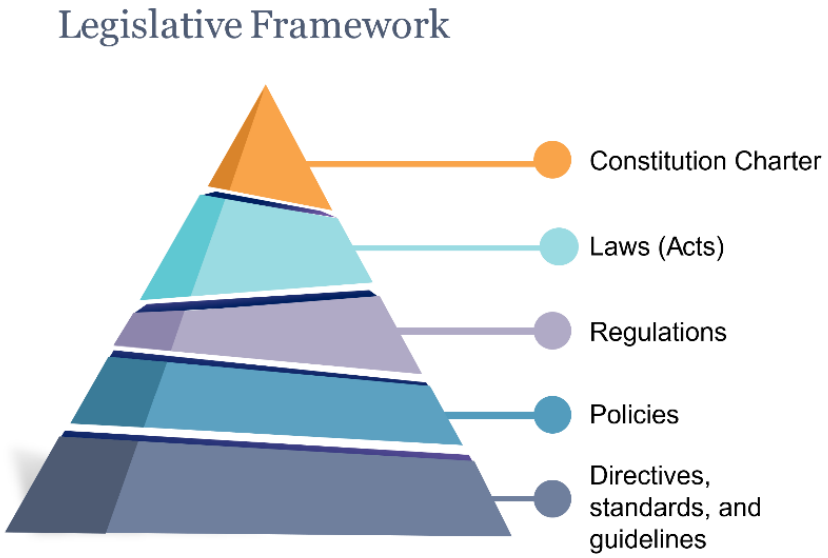

Module 1: TBS Policy, Legislation, Mandate Letters, *Our North, Strong and Free: A renewed Vision for Canada's Defence*
Government of Canada Direction
Departmental Policy
Module 2: Internal Departmental Policy Suites
FAM, SAM, PAM, TSG
Functional Planning Guidance
Business Execution
Module 3: Readiness (Goal) + Sustainment of ongoing Operations
Integration (DSC Life Cycle)
Roles & Responsibilities
IT Systems & Tools
Validation
Module 4: Business Information/Analytics, Performance measures, Compliance, Monitoring
Reporting
Module 5: Audits, MAPs Financial Statements

The Cycle

Module 1: TBS Policy, Legislation, Mandate Letters, *Strong Secure Engaged*: Canada's Defence Policy



Topic #1: Legislative Framework



- Legislation/Acts
- Regulations
- International Agreements
- Mandate Letters
- *Strong Secure Engaged*: Canada's Defence Policy (2017-2024)
- *Our North, Strong and Free: A renewed Vision for Canada's Defence*
- Government Policy Objectives (*Green & Indigenous Procurement*)
- Treasury Board Directives

Some Key Higher Order Direction

a. National Defence Act (R.S.C., 1985, c. N-5);
b. Federal Accountability Act (S.C.2006, c.9);
c. Defence Production Act (R.S.C., 1985, c. D-1);
d. Financial Administration Act (FAA);
e. Surplus Crown Assets Act (R.S.C., 1985, c. S-27);
f. Security of Information Act (justice.gc.ca);
g. Export and Import Permits Act (R.S.C., 1985, c.E-19);
h. Federal Real Property and Federal Immovables Act (S.C. 1991, c.50);
i. Hazardous Products Act (R.S.C., 1985, c.H-3);
j. The International Traffic in Arms Regulations (ITAR);
k. Controlled Technology Access and Transfer (CTAT);
l. Controlled Goods Regulations;
m. Arms Trade Treaty;
n. Treasury Board - Directive on the Management of Materiel

Individual Topics

a. Alternative Fuels Act;
b. Emergencies Act;
c. Canadian Environmental Protection Act, 1999 and associated regulations;
d. Transportation of Dangerous Goods Act, 1992;
e. Liquefied Petroleum Gases Bulk Storage Regulations
f. Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations, SOR/2008-197;
g. Criminal Code of Canada
h. Government Contracts Regulations (SOR.87-402);
i. Public Services and Procurement Canada (PSPC) Policy and Guidelines- Supply Manual;
j. Public Services and Procurement Canada (PSPC) Green Procurement;
k. TBITS 25: Materiel Coding – Implementation Criteria
l. STANAGs

Topic #2: Governmental Expectations

- Program Delivery
- Sound Stewardship
- Value for Money
- Open, Fair, Transparent
- These are consistent across directives on
  - Materiel management
  - Procurement
  - Real Property and
  - Investment Planning

Topic #3: Purpose of the Policies

- Standardization across Government
- Demonstration of Due Diligence with Resources from the Government of Canada
- Alignment with the Values and Ethics of Canada
- Safety and Security

Topic #4: Additional Context

- National Defence within the Whole of Government
- National Defence Leadership Structure – Governance of the DSC
- Strategic Environment

National Defence in the “Whole of Government”

Defence Management: A Government of Canada activity involving multiple Departments

DSC Leadership Structure

Minister of National Defence

Hon Bill Blair

Deputy Minister National Defence

Stephanie Beck

Chief of Defence Staff

Gen Wayne Eyre

ADM(Materiel)

Troy Crosby

Strategic J4

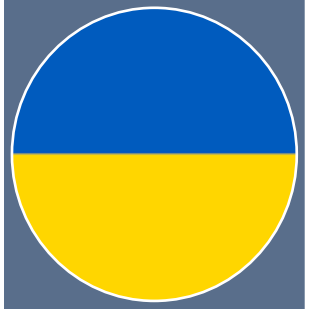
BGen Girouard

Joint Accountability for the Defence Supply Chain

Strategic Environment

Defence Policy Update

Defence Procurement Review



Support to Ukraine

Defence Capability Modernization

Supply Chain Risk

DSC Business Modernization

Module 1: Question & Answer

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Event code: DSC

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Key Takeaways

- That Internal Policies and Directives are linked to External Policies, Legislation and Directives and there are a lot of them
- Standardization across the government for Government of Canada initiatives and expectations
- They key expectations of GoC are repeated across Policy Instruments

End of Module 1

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Module 2

Departmental Policy

Bronwynn Guymer

Section Head

DMPP 7

Défense nationale National Defence

Module 2 - Departmental Policy

Learning objectives

At the end of this module, you will be able to:

- Identify key Internal Policy Instruments
- Describe the Aspects of Policy Design
- Describe the concept of Integration, Integration, Integration.

Module 2 - Departmental Policy

Main Topics:

1. Key Internal Policies
2. Aspects of Policy Design
3. Integration in Policy

Activity 2-1

Join at slido.com
Event code: DSC

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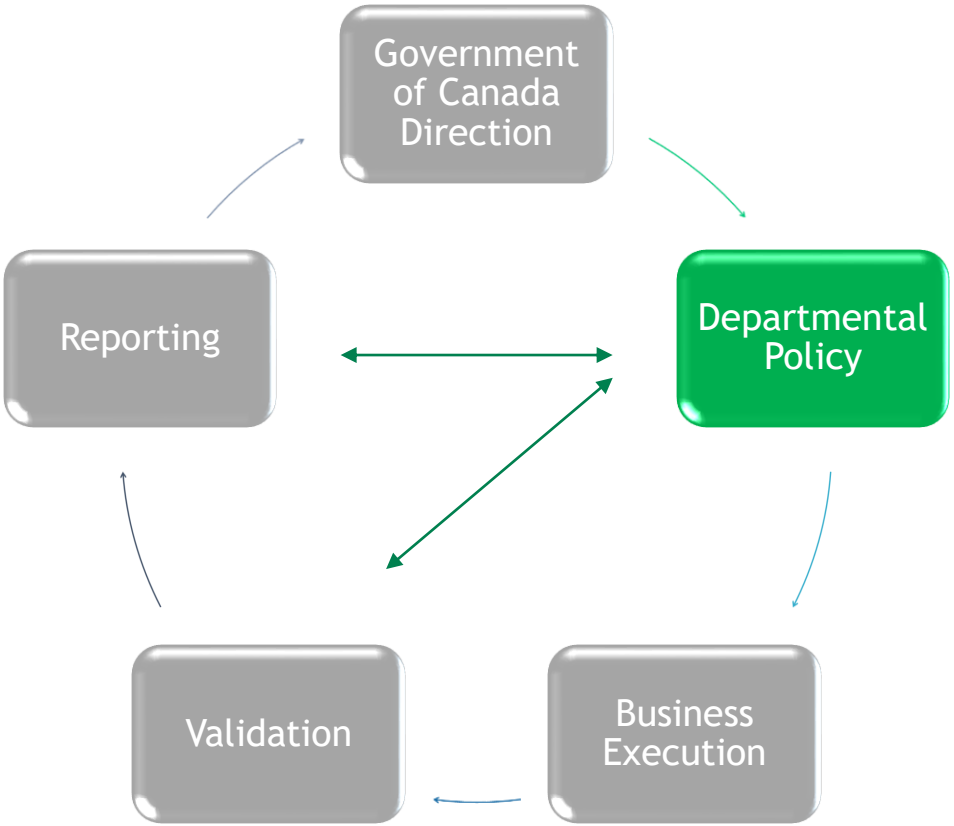
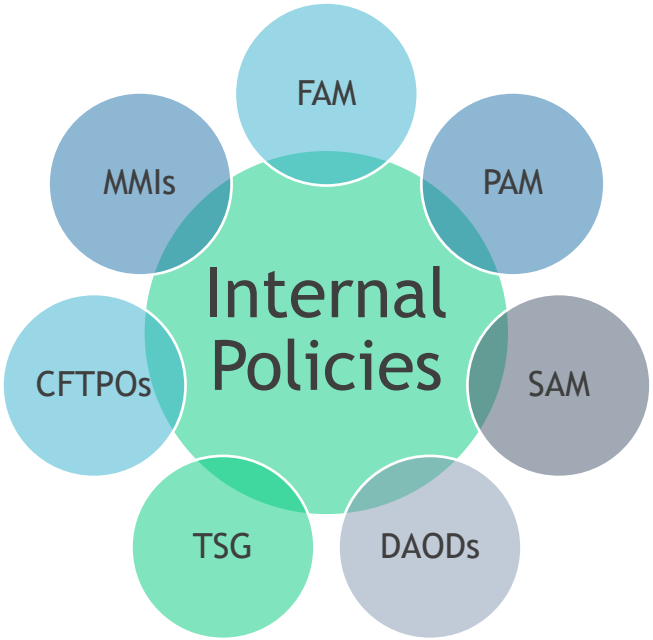
The Cycle



Module 2: Internal Departmental Policy Suites
FAM, SAM, PAM, TSG

Topic #1: Key Internal Policies

External Requirements



Business Execution

You don't get to pick and choose!

Topic #2: Aspects Policy Design

Functional

Internal Business Processes

Lifecycle Management of Materiel

Planning

Acquisition

Operations & Maintenance

Divestment

Cross Functional

Operational

Materiel Management

Financial (Budgeting/Public Statements

Engineering & Maintenance

Distribution

Procurement

Sustainment

Enablers

Policies, Processes & Procedures

Roles & Authorities

Training

Knowledge Management

Accountability

Internal Controls

BI/Reporting

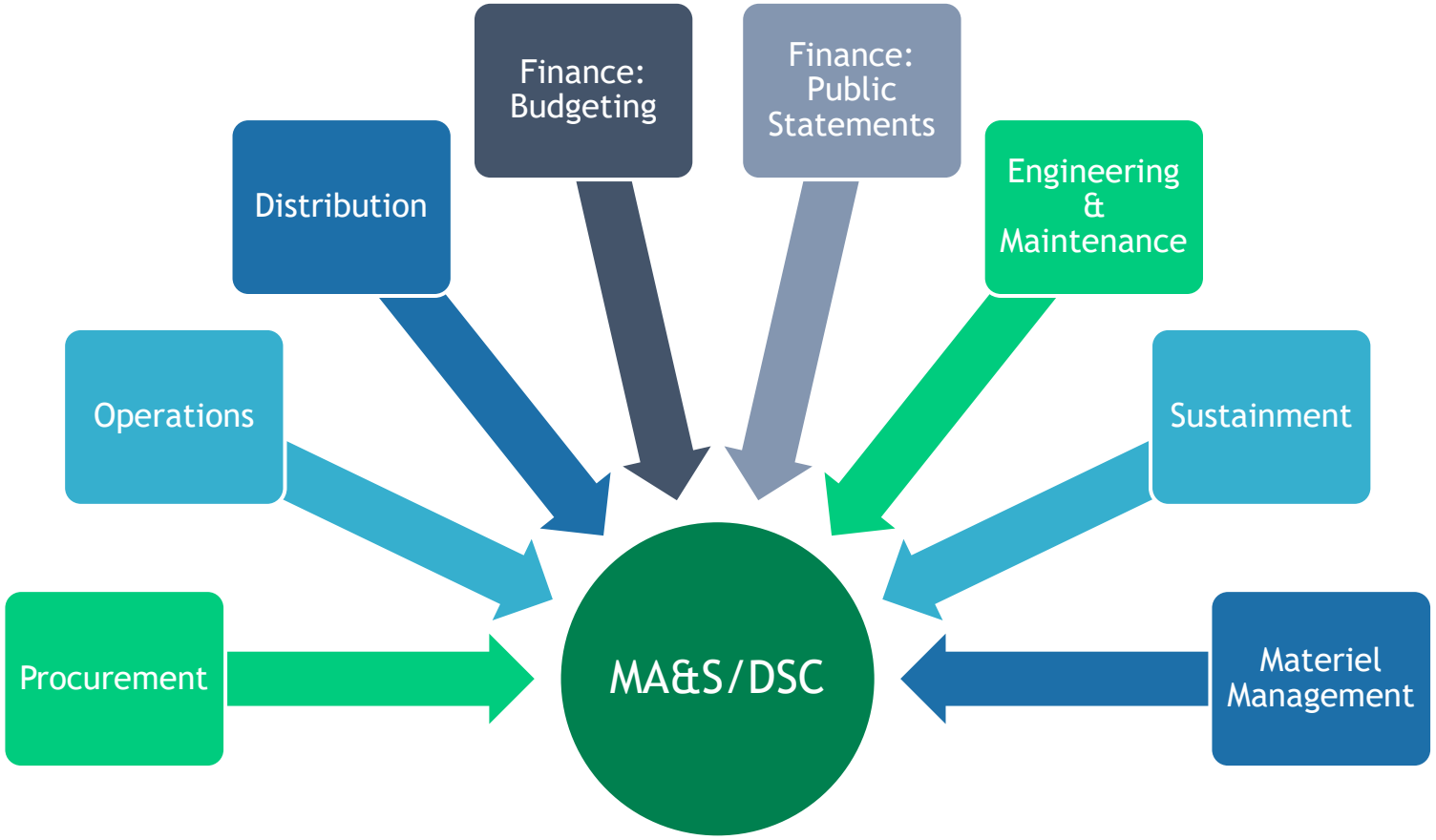
Compliance

Monitoring

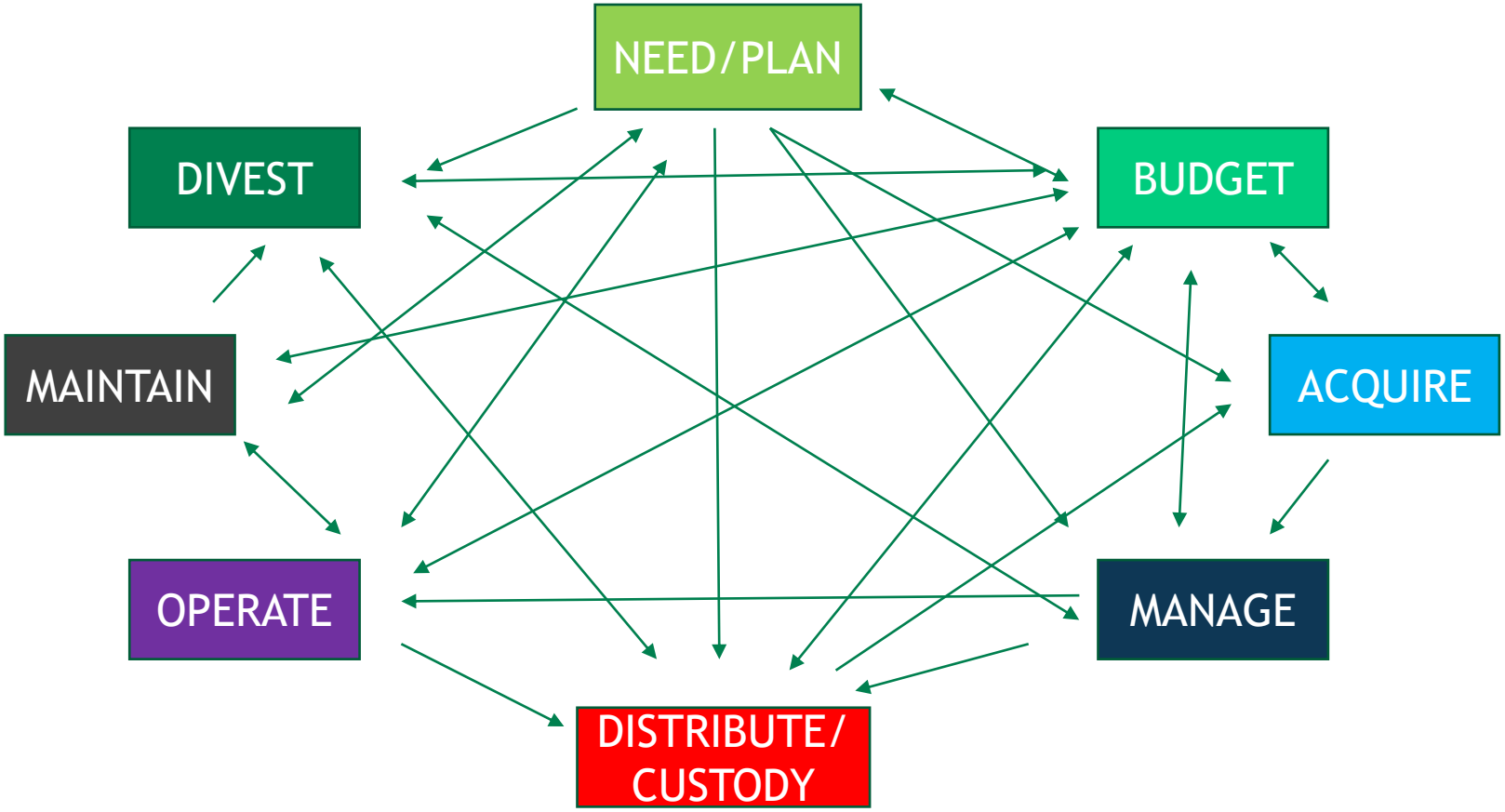
System/SAP

Integration, Integration, Integration

Topic #3: Integration in Policy



Integration



Module 2: Question & Answer

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Event code: DSC

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Key Takeaways

- Synthesize the applicable GoC Directions
- Are a key part of Knowledge Management
- Integration: Functional Area
- Integration: Cross Functionally
- Integration: Enablers

Additional Resources

Policy, Library & Tools

Policies and Procedures

- Address Indicating Group (AIG) Messages (Materiel Management)
- ADM(Mat) Functional Planning Guidance 2024-25 | Next year
- ADM(Mat) Functional Planning Guidance 2023-24 | Current year
- Ammunition Policies and Directives
- Arrivals, Departures and Centralized Processes
- Designation of Commanding Officers in the Materiel Group
- Environmental Management System Instructions
- Guide to the Analysis of Reinvestment Opportunities (DOC, 2 MB)
- Indigenous Procurement Framework for the Department of National Defence and the Canadian Armed Forces
- Manual of AEPM Procedures
- Materiel, Acquisition and Support (MA&S) Enterprise Processes
  - if this link does not open, please right click on linked text, select "Copy link" and paste the copied link into your browser address bar
- Materiel Group Instructions (MGI)
- Materiel Management Instructions (MMI)
- Procurement Administration Manual (PAM)
- Supply Administration Manual (SAM)
- Technical Support Guide (TSG)

Tools and Information Systems

- ADM(Mat) templates (Corporate visual identity) - internal facing
- Canadian Government Cataloguing System (CGCS)
- Contract Data Management System (CDMS)
- Defence Lessons Learned System
- DND templates (Corporate visual identity) - external facing
- Distribution Resource Planning (DRP)
- Hazardous Materials Reference Application (HMRA)
- MA&S Role-Based Compendium
- Records, Document and Information Management System (RDIMS)
- Unsatisfactory Condition Report

Publications

- Defence Supply Chain Annual Report 2022-2023 (PDF, 1.4 MB)
- Defence Supply Chain Annual Report 2021-2022 (PDF, 4 MB)
- Defence Supply Chain Annual Report 2019-2020 (PDF, 2 MB)
- Publications Depot
- NATO Publications Support

See also

- CANFORGENS
- Defence Administrative Orders and Directives (DAODs)
- Defence Sustainment Business Case Analysis GCpedia
- Defence Terminology Bank
- Defence Resource Management Information System (DRMIS)
- Delegation of Authority
- Financial Administration Manual (FAM)
- Project Approval Directive (PAD) 2015

End of Module 2

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Break
15 Mins

DSC Business Acumen

Module 3

DSC Business Execution

Foundational Knowledge Elements

Wade Knorr

ERP Senior Business Integration Architect
DGMEPM

Nihal Basnayake

ERP Senior Systems Analyst
DGAEPM

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Module 3G - DSC Business Execution MAIN TOPICS

A. Core Supply Chain Concepts, Goals and Operation
B. Integration in the DSC
C. Materiel Requirements Planning (MRP) Concepts
D. Roles & Responsibilities
E. IT Systems & Tools
F. Enabling the Smooth Flow of Data and Materiel

Module 3 – DSC Business Execution
Section A. Core Supply Chain Concepts, Goals and Operation

Learning objectives

At the end of this Section, you will be able to:

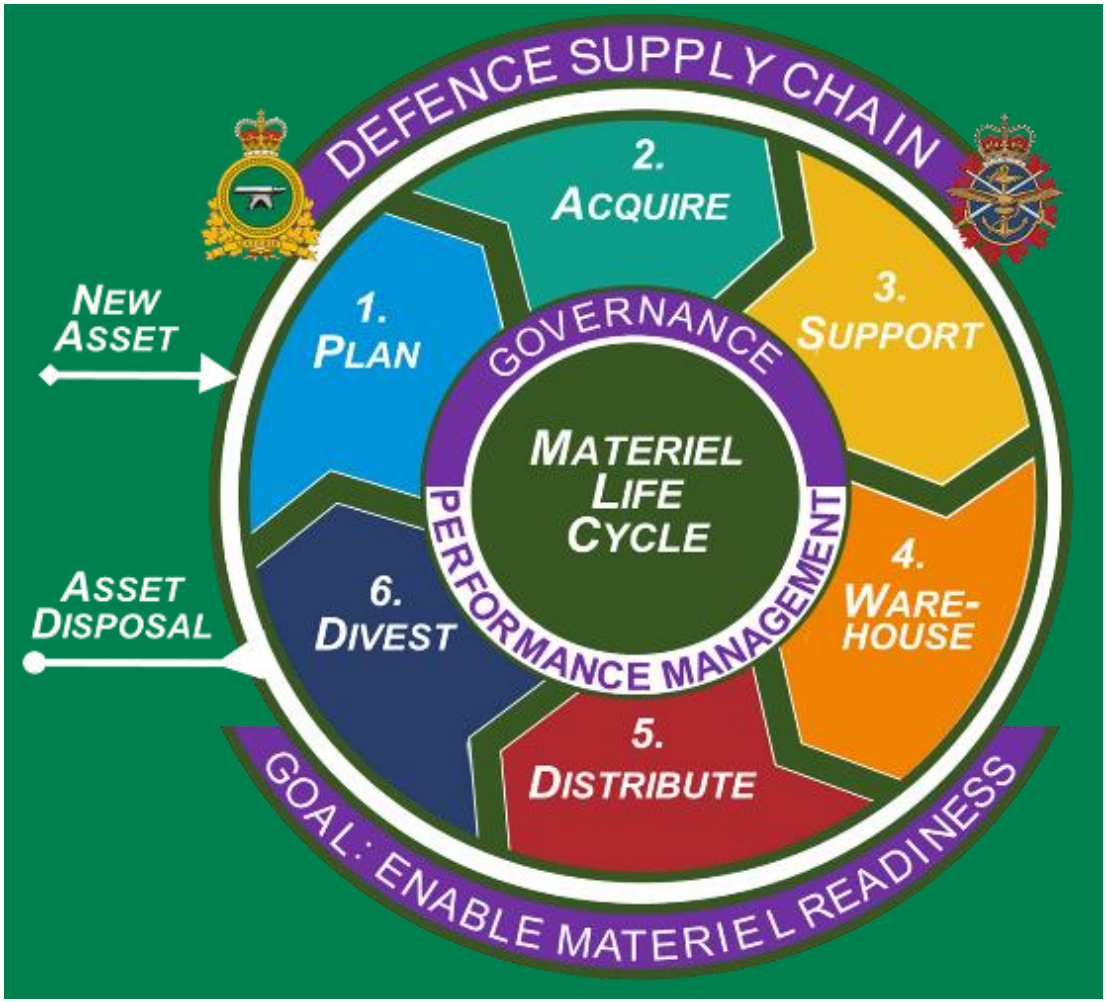
- Explain the purpose, scope and depth and key activities of the DSC
- Articulate the vision/mission, and the strategic objectives and attributes of the DSC
- Describe the key building blocks of a DSC Model
- Explain the types of demands at various lines of supply and distribution concepts

DSC Definition, Goal and Key Business Activities

DEFINITIONS

Defence Supply Chain (DSC Governance Charter): The DSC is from **beginning to end supply functions** housed within the National Defence Organizations, other government Departments and industry to deliver **materiel sustainment** to the Canadian Armed Forces.

Materiel Sustainment (*soutien du matériel*)(DAOD 3005-0): Coordinated activities required to support materiel throughout its service life. (Defence Terminology Bank record number 694822)



DSC Mission/Vision

- **Mission**: The mission of the DSC is to deliver…
  - ✓ ***the right materiel***
  - ✓ ***at the right place and time***
  - ✓ ***in the right condition***

  as required by the Canadian Armed Forces in as ***cost-effective manner*** as possible.

  Achievement of the mission also requires the materiality and stewardship demands of the Government of Canada be adhered to

- **Vision**: The DSC…
  - is an **agile and efficient end-to-end strategic capability** that fully meets the materiel support requirements of the Canadian Armed Forces and the stewardship obligations of the Government of Canada.
  - employs **evidence-based decision making**, **modernized processes and technologies**, and is delivered by military and civilian professionals committed to continuous improvement.

Types of Materiel in the DSC

Operational Weapons Systems

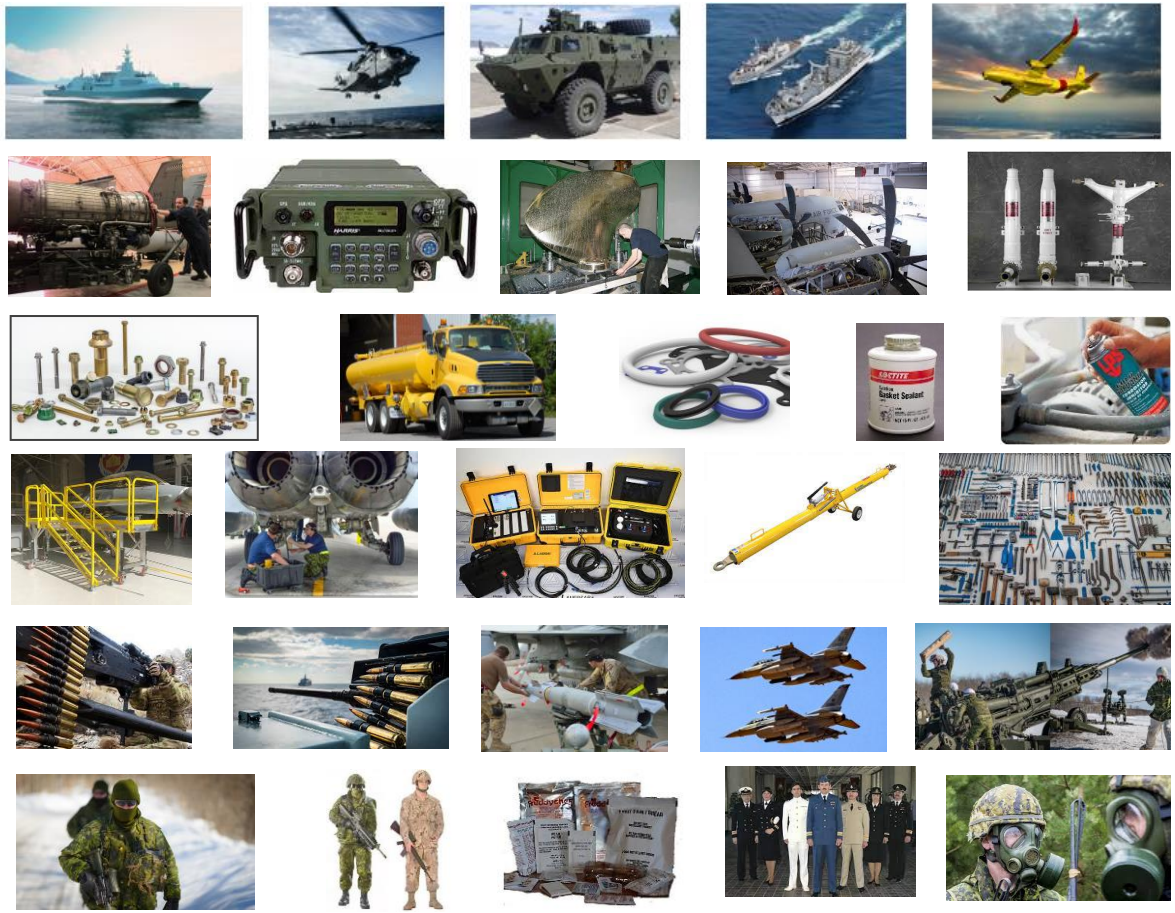
Complex Components and Parts

Consumables
(e.g. POL, nuts & bolts, etc)

Support & Test Equip

Ammunition

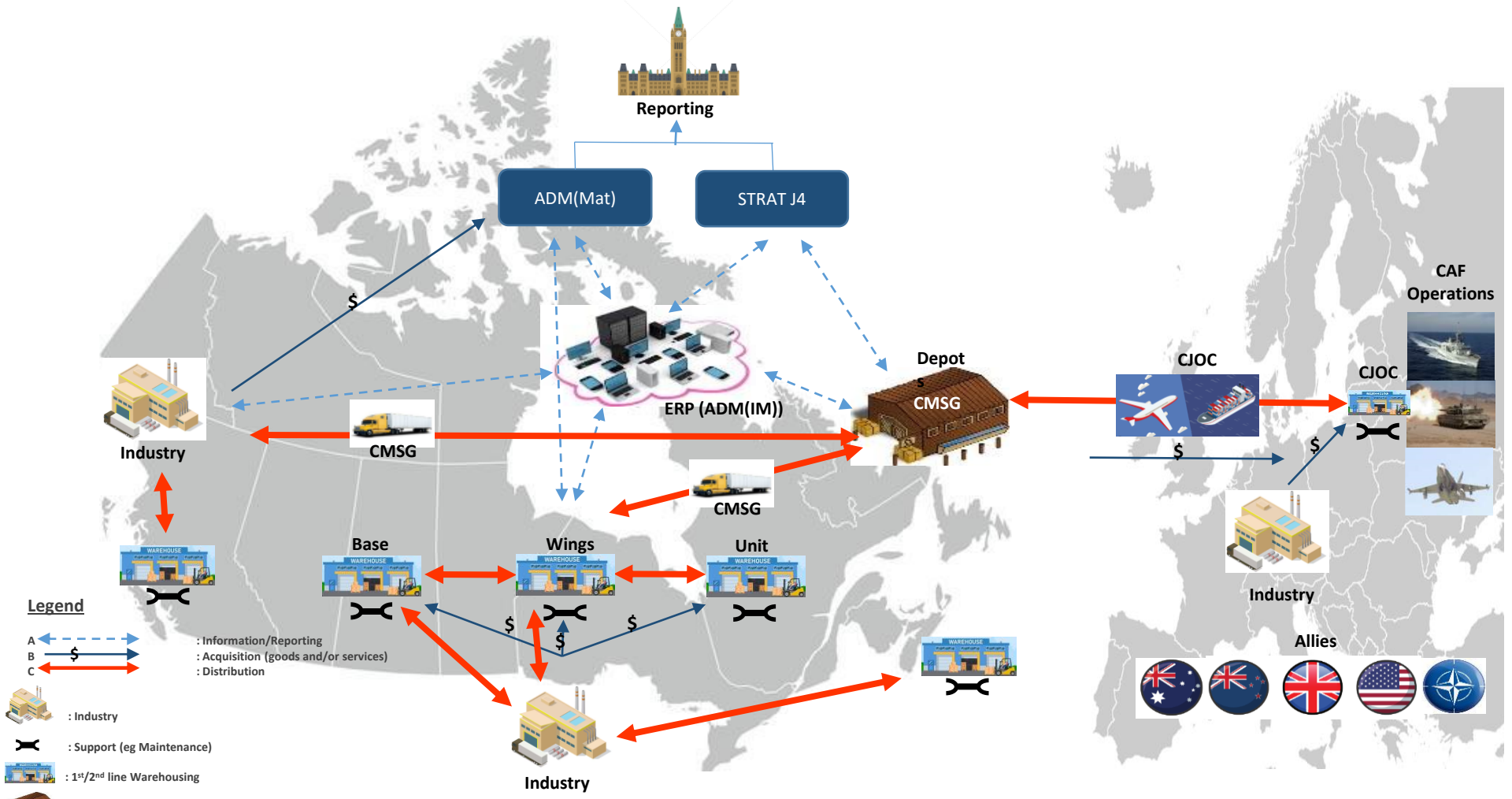
Military Clothing, Rations and much more!



Materiel Accountability
~ 600M stocked items ~ $6B inventory & ammo ~ $74B assets & weapon systems

Introduction: Core Supply Chain Concepts, Goals and Operation

The Defence Supply Chain Illustrated



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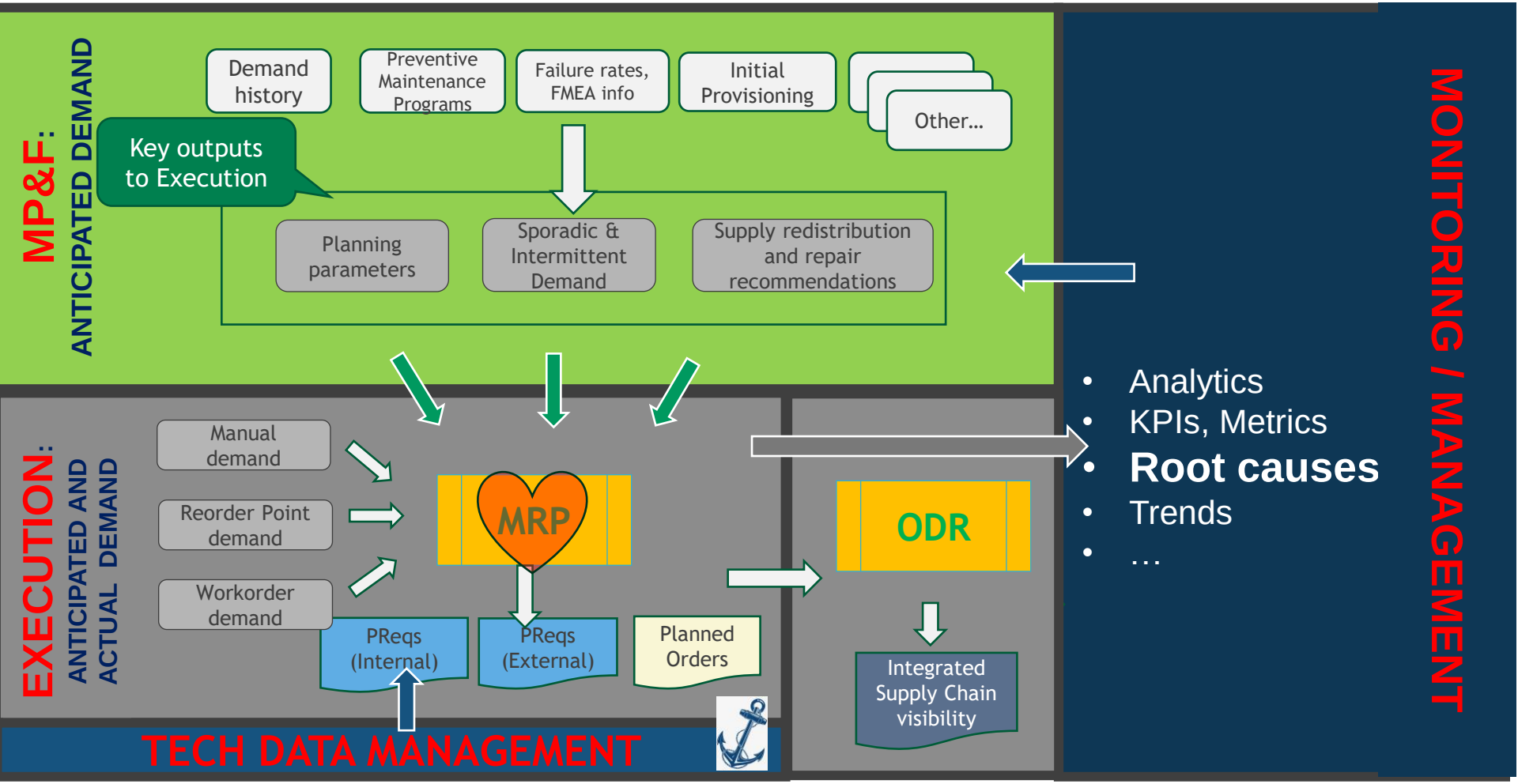
Introduction: Core Supply Chain Concepts, Goals and Operation

DSC Illustration to Highlight Primacy of Support to Operations

Introduction: Core Supply Chain Concepts, Goals and Operation

A Defence Supply Chain Architectural Framework



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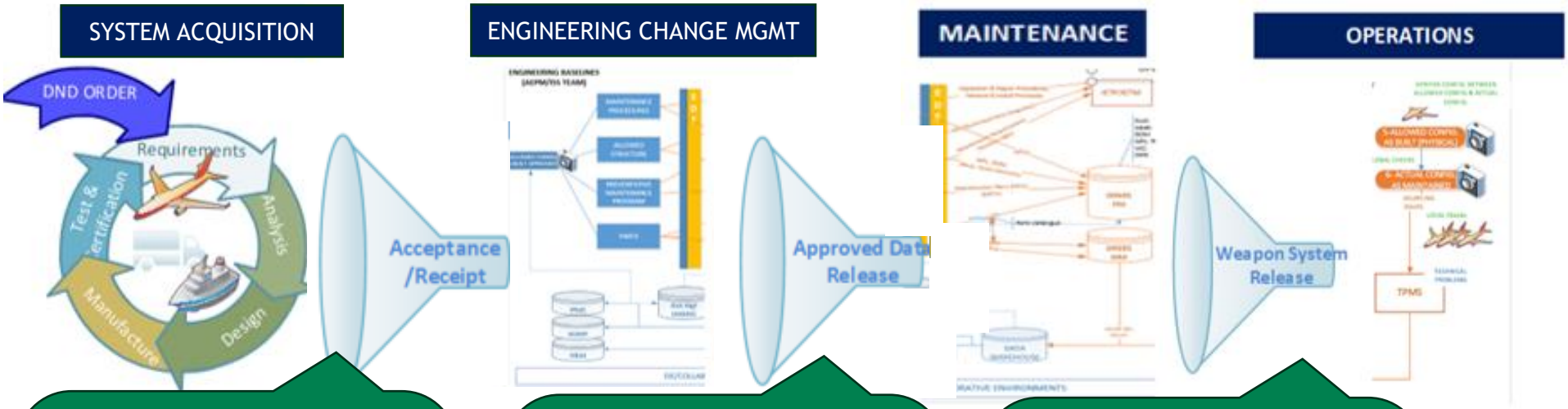
Introduction: Core Supply Chain Concepts, Goals and Operation

The 3 Funnels of the DSC



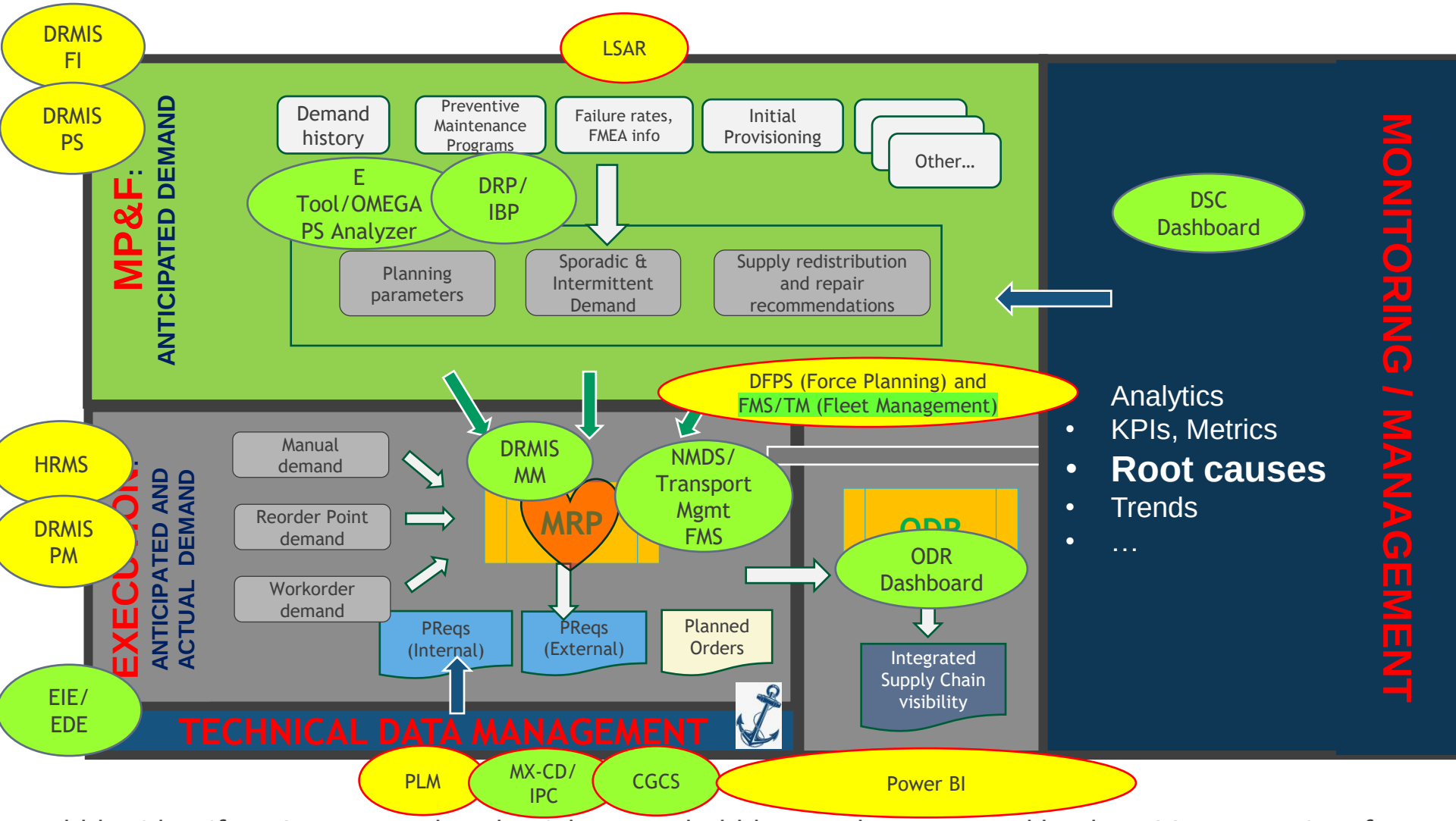
1. Ops System Delivery
2. Physical Audit
3. Technical Data Package-As-Built Configuration
4. Procurement matches Financials
5. Transfer of Ownership

1. Technical Publications
2. Master Data
3. Configuration Status Accounting for As-Maintained Configuration
4. DRMIS Baselined

1. PM – maintenance transactional records and usage tracking
2. MM – materiel transactional records
3. Weapon System Technical Status (for use by Operations)

The DSC Architectural Framework is IM/IT Enabled

DRMIS Modules which are Interfaced with each other and External Systems



Bubbles identify IT Systems and Tools. Light green bubbles are the most used by the DSC community of practice.

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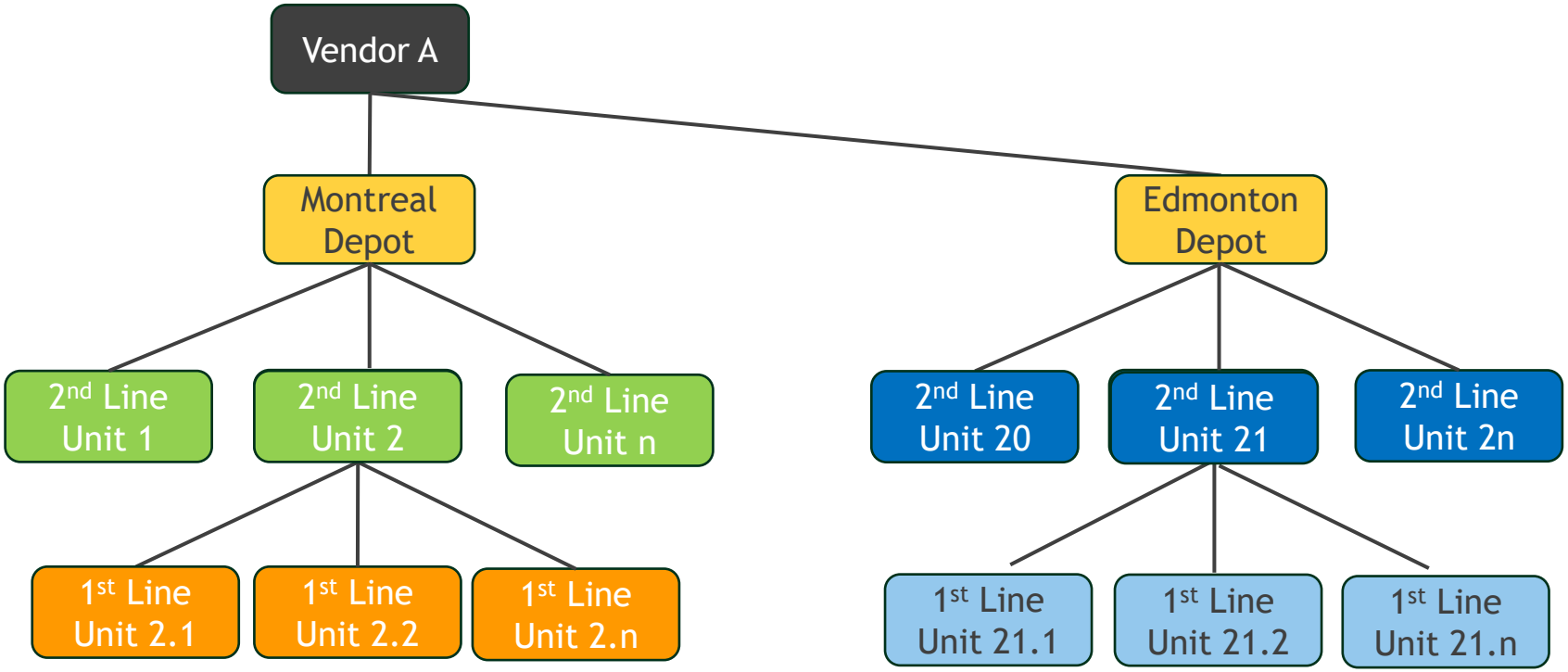
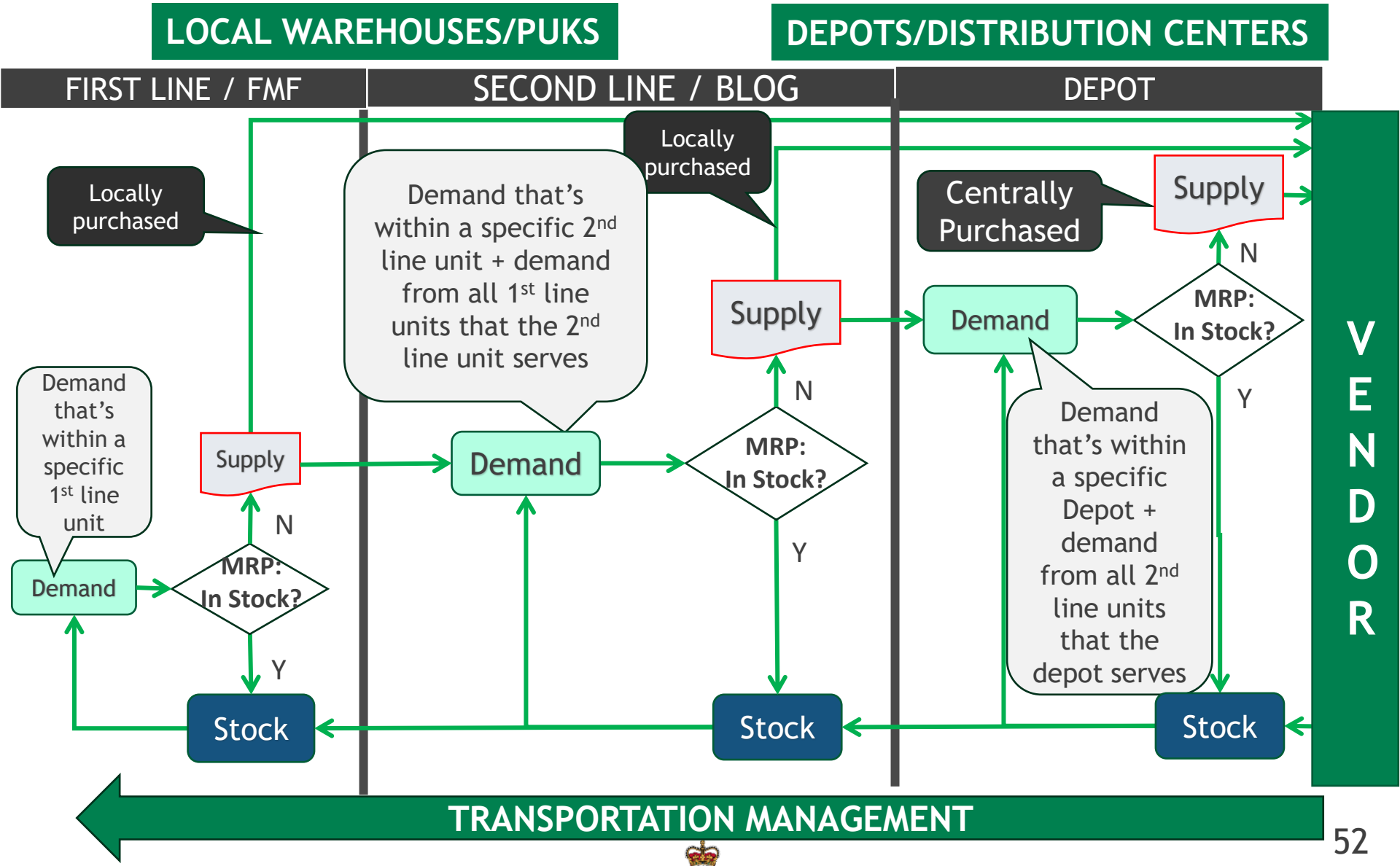
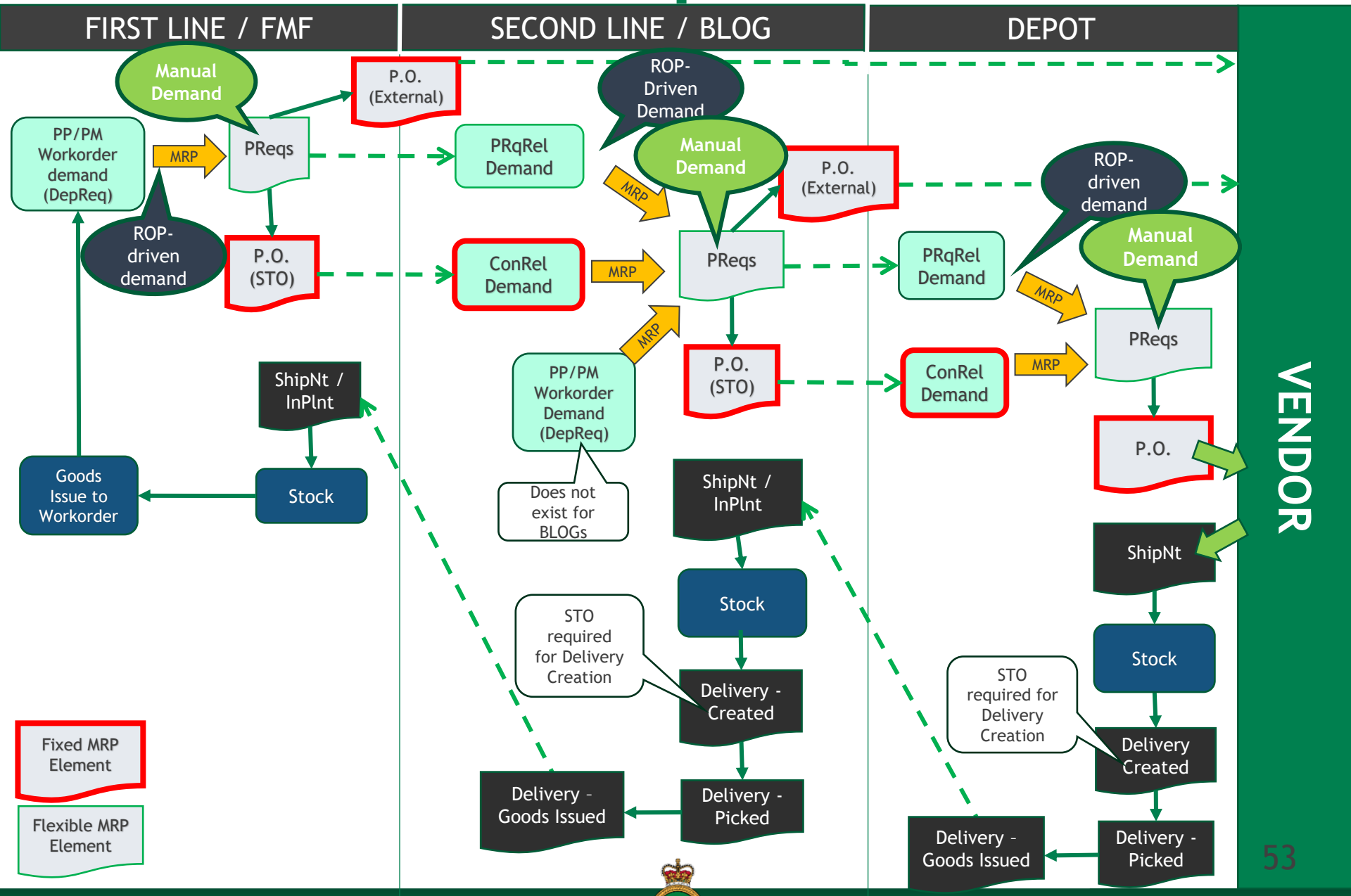
DSC Lines of Supply



DSC Process Steps Across Lines of Supply-Simplified



DSC Process Steps within DRMIS



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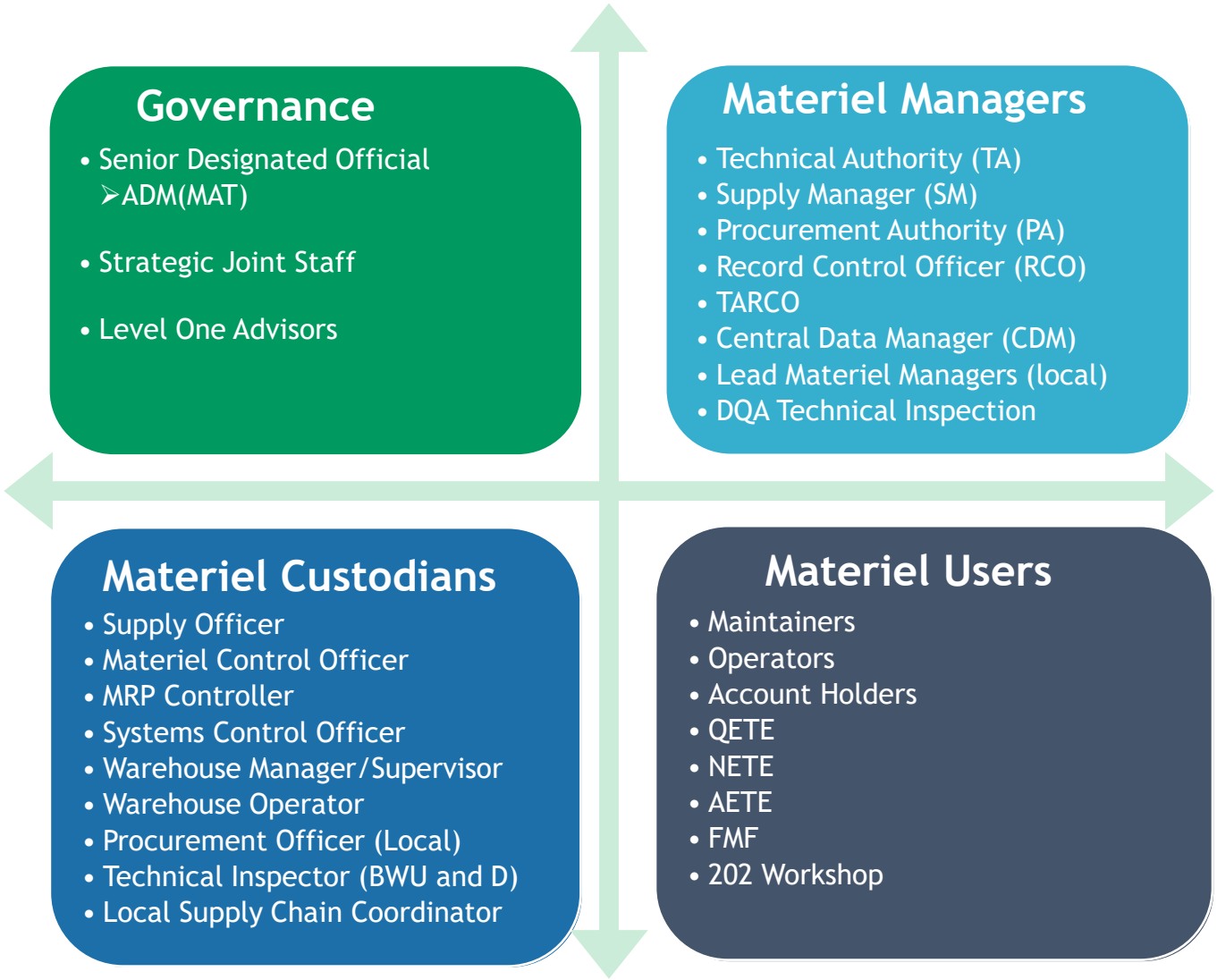
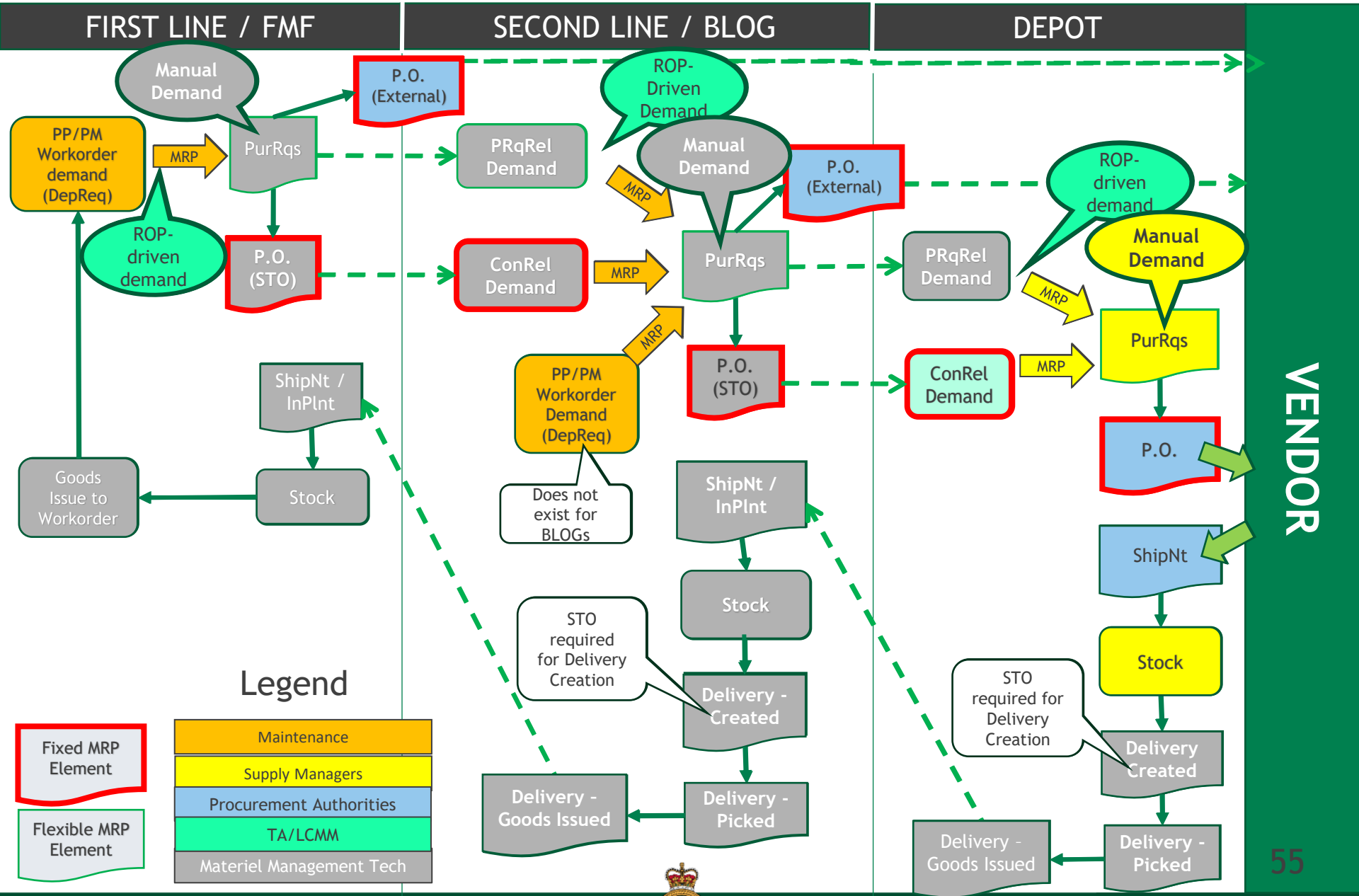
DSC Roles/Actors



DSC Process Steps within DRMIS – *PRIMARY* DSC Roles Overlay



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Activity 3-1

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Event code: DSC

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SLIDO #3-1:
The Importance of DSC Attributes

What are the Top 3 DSC attributes you consider to be the MOST important?

A) **Predictability/Stability:** minimal variability in processing times and minimal churn in demand and supply objects, dates and quantities – minimization of this factor will lead to predictable deliveries.

B) **Throughput:** The velocity of information, demands and materiel through the Supply Chain – high velocity serves to maximize service levels

C) **Optimal Service Levels:** Optimization of demand turnaround time considering available finances/operational criticality

D) **Optimal Inventory Levels:** Levels are neither tool high nor too low. Inventory is in place in the anticipated area of demand (i.e. the right place)

E) **Data/Information Accuracy:** Definitions are agreed to by all organizations and data/information is error free and complete

F) **Responsiveness/Agility:** Speed of response to demand changes (e.g. points of demand, quantities, dates, etc) and the ability to anticipate change patterns and trends

ANSWER: No Correct Answer. This SLIDO is intended to demonstrate the importance of having baseline KPIs to enable the observation of trends and measured levels of performance against established targets so as be able to improve DSC performance

Module 3G - DSC Business Execution MAIN TOPICS

A. Core Supply Chain Concepts, Goals and Operation

B. Integration in the DSC

C. Materiel Requirements Planning (MRP) Concepts

D. Roles & Responsibilities

E. IT Systems & Tools

F. Enabling the Smooth Flow of Data and Materiel

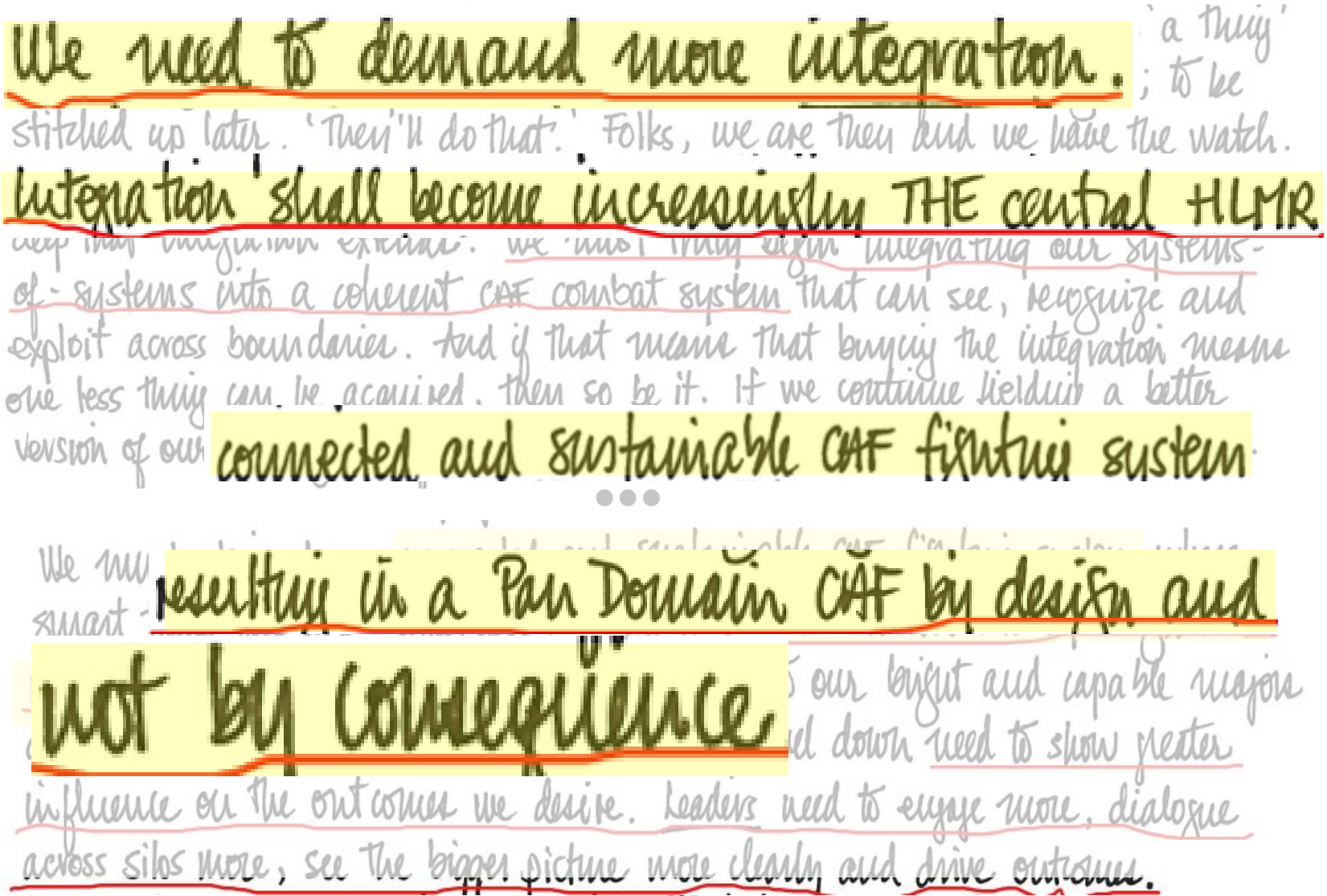
Learning objectives

Module 3 – DSC Business Execution
Section B. Integration in the DSC

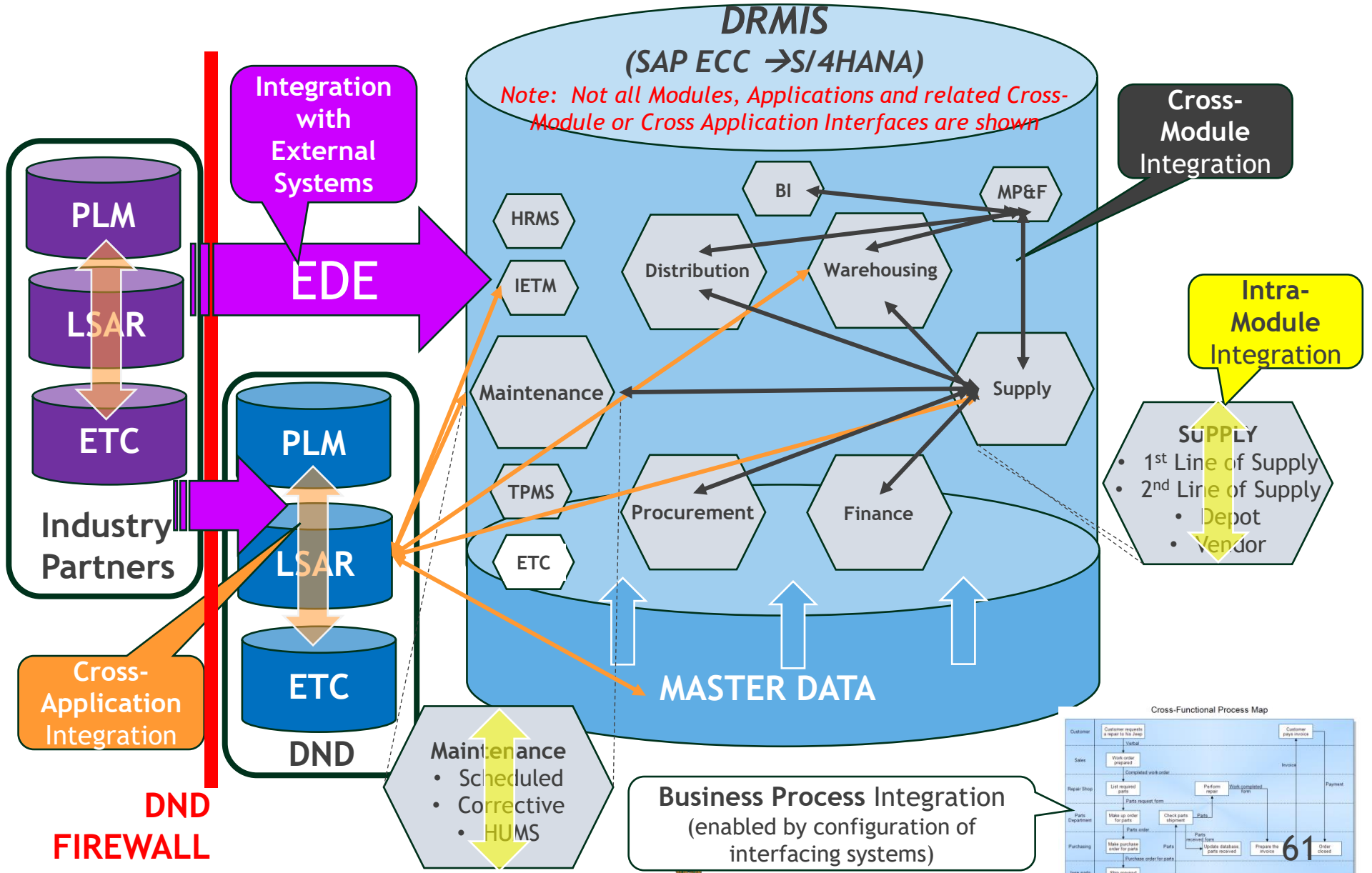
At the end of this Section, you will be able to:

- Define Integration and list the types of Integration
- Explain that the DSC needs to be Integrated by Design and not by Consequence and why
- Elaborate on the benefits of Integration
- Identify the key integration points between MM and PM

VCDS Open Letter to L1s (Oct 2020)



Integration Requirements within the DSC



Benefits of Integration

- ✓ Information is readily shared between business processes/DSC actors
- ✓ Improved Agility and Efficiency
- ✓ Trusted Data (i.e. Accurate and Complete)
- ✓ Reduced IT investment and costs
- ✓ Enables Automation of some Business Processes
- ✓ Improved motivation/sense of accountability

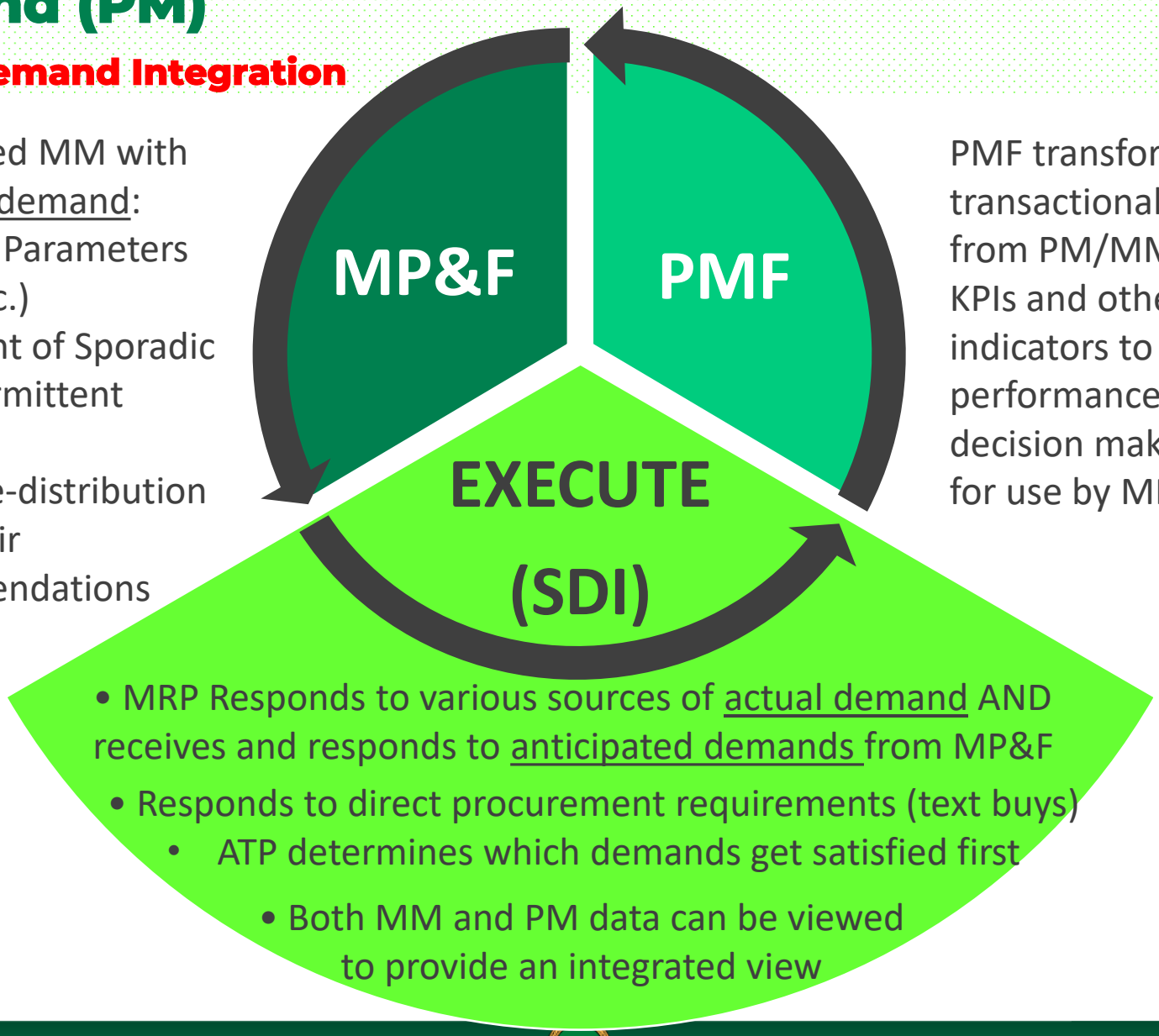
Without integration the opposite of the above will be realized.

Key Integration Points between Supply (MM) and Demand (PM)

Supply Demand Integration

MP&F to feed MM with <u>anticipated demand</u>:

- Planning Parameters (ROPs etc.)
- Treatment of Sporadic and Intermittent Demand
- Supply re-distribution and repair recommendations

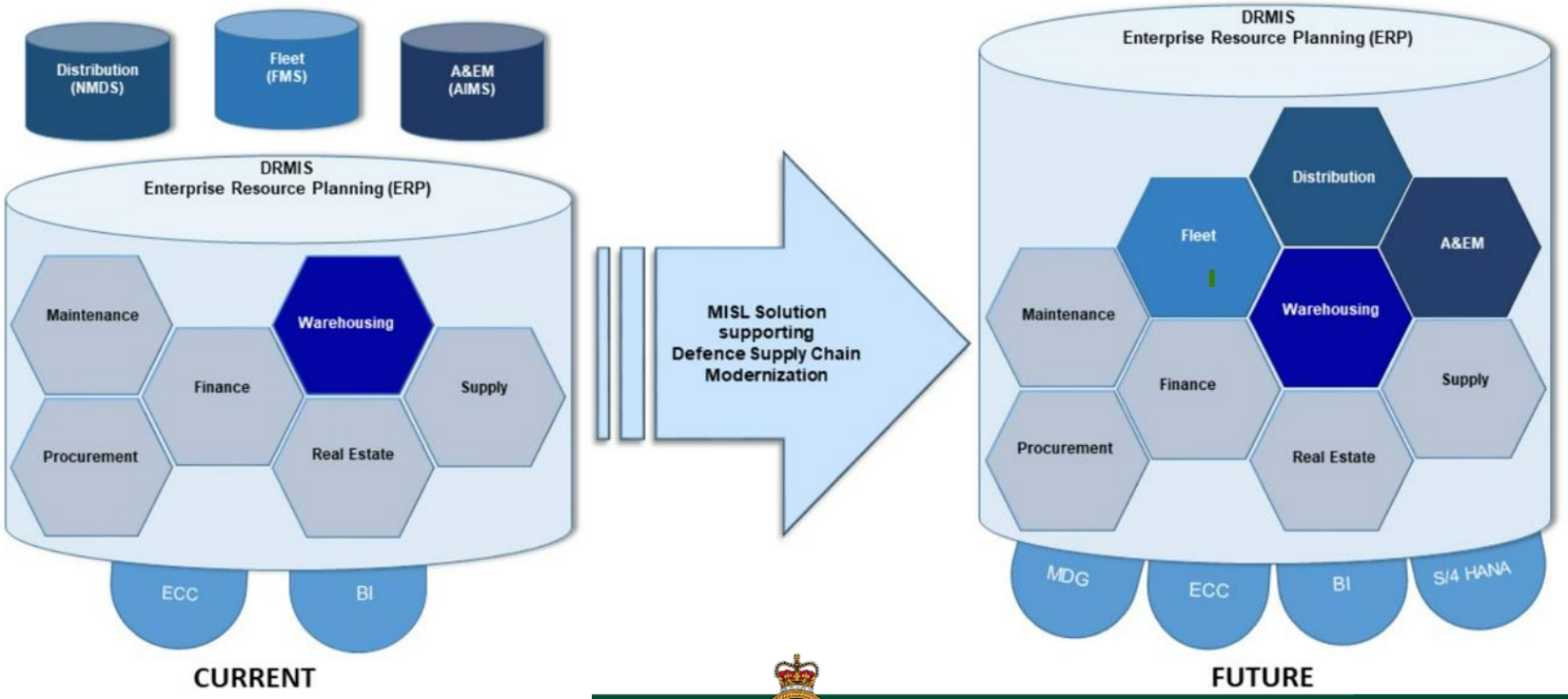


PMF transforms transactional data from PM/MM into KPIs and other health indicators to enable performance-based decision making and for use by MP&F

Modernization & Integration of Sustainment and Logistics (MISL)

MISL is an Enterprise Modernization Initiative (EMI) part of the Defence Resource Business Modernization (DRBM) Program to improve effectiveness and efficiency of the Defence Supply Chain (DSC).

As part of this modernization, MISL will **integrate** functionality of stand-alone logistics systems (NMDS, FMS, AIMS,) and enhance current DRMIS functionalities **into a robust, integrated SAP ERP for Warehousing and Distribution (W&D) within the Defence Supply Chain (DSC)**.



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Activity 3-2

Join at slido.com
Event code: DSC

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SLIDO #3-2:

SAP is promoted for its built-in cross-module integration; however, the actual level of integration is a function of set-up. For DRMIS ECC, which of the following are TRUE when it comes to integration between PM and MM ?

A) The requirement date in supply documents is the same as that in Work Orders

B) It is clear from supply demands which are for vehicles that are grounded.

C) The priority of a supply demand triggered by a maintenance work order is taken directly from the priority in the work order.

D) The supply system is set-up to distinguish between the relative importance of work-order demands (e.g. one required to support a deployed mission vs one for a ROP).

E) B and D are TRUE

(F) Is the correct answer. All are FALSE indicates the need to improve integration within DRMIS so that the ULTIMATE benefit can be realized - the Right Part is delivered for the most important requirement in a timely fashion.

Module 3G - DSC Business Execution MAIN TOPICS

A. Core Supply Chain Concepts, Goals and Operation
B. Integration in the DSC
C. **Materiel Requirements Planning (MRP) Concepts**
D. Roles & Responsibilities
E. IT Systems & Tools
F. Enabling the Smooth Flow of Data and Materiel

Learning objectives

Module 3 – DSC Business Execution
Section C. Materiel Requirements Planning (MRP) Concepts and Special Topics

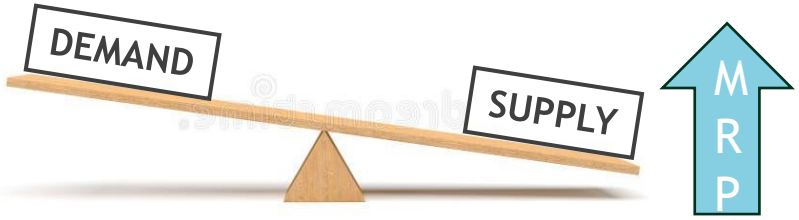
At the end of this Section, you will be able to explain:

- The difference between MRP and ATP
- What constitutes a demand vs supply and types
- How MRP works at a high level including how it schedules to satisfy demands
- MRP Areas and Lines of Supply

What is Materiel Requirements Planning (MRP)?

MRP is a capability within SAP ECC that enables the system to ***maintain an equilibrium between demand and supply***. It attempts to efficiently utilize inventory and deliver the right product on time.

When demand exceeds supply, MRP will create Order Proposals, usually in the form of PReqs (Purchase Requisitions)



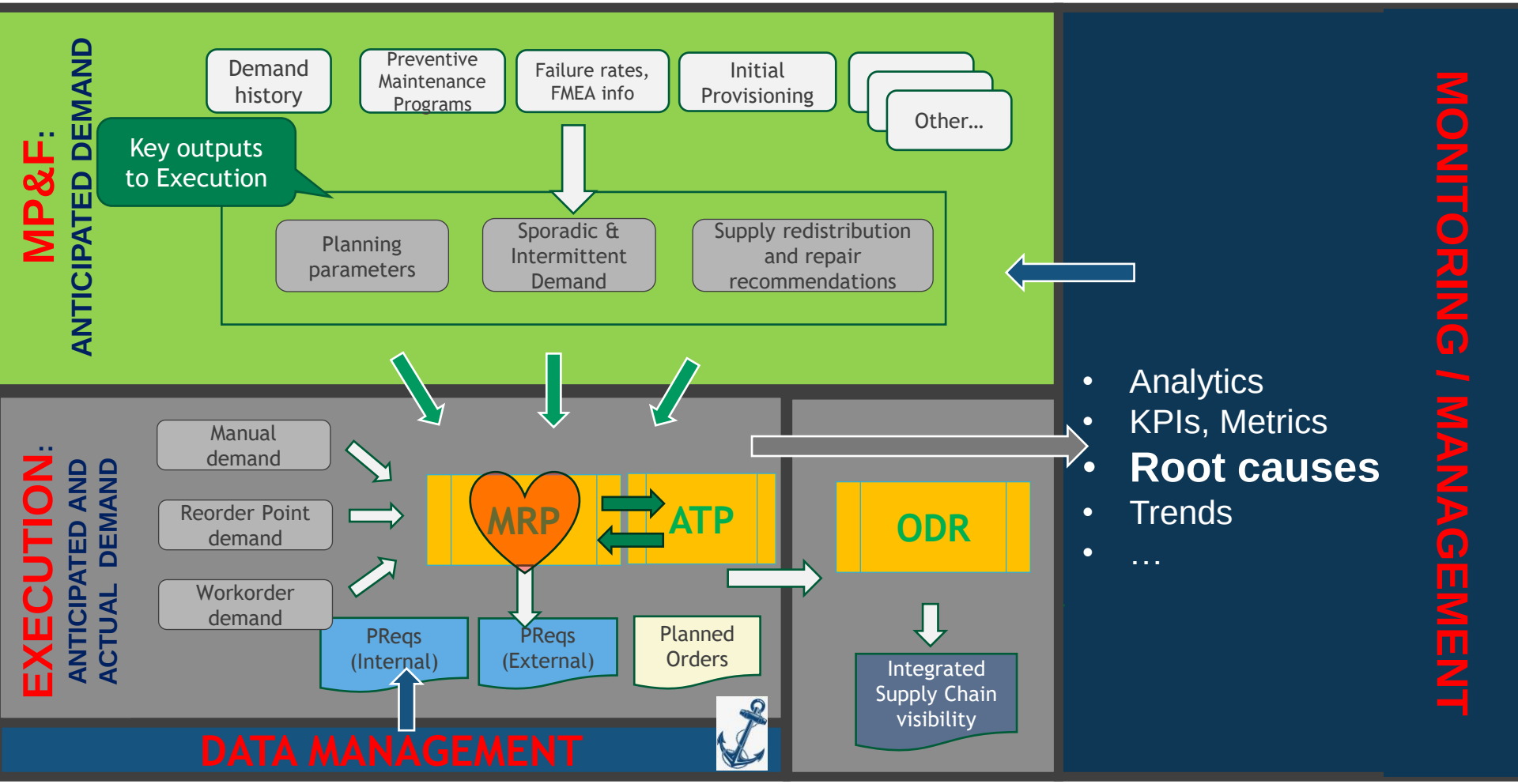
When supply exceeds demand, MRP will attempt to delete the excess supply elements

NOTES

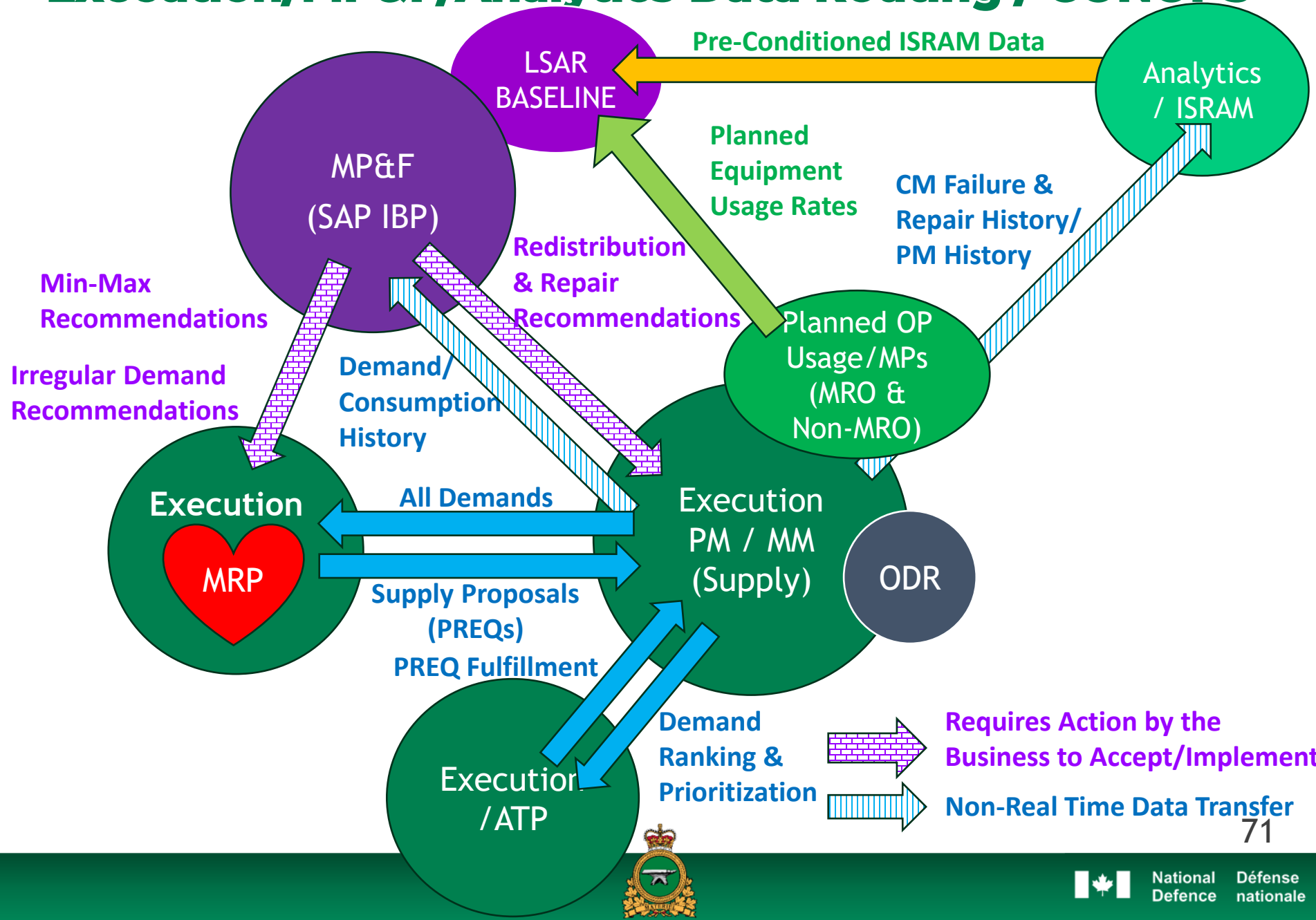
- MRP runs at least once a day as a batch job
- When demand quantities or dates change, MRP will attempt to make changes to the corresponding supply object

Introduction: Core Supply Chain Concepts, Goals and Operation

A Defence Supply Chain Model



Execution/MP&F/Analytics Data Routing / CONOPS



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Terminology: Demand vs Supply

DEMAND: Any request for a materiel that needs to be processed, that may result in the creation of a corresponding supply.

SUPPLY: Stock and any incoming receipt into stock is considered as being supply. Created automatically by MRP, other system processes or created manually.

Actual Demand: One which, when issued, will immediately satisfy the demand.

Type of demand	1st line/FMF	2nd line/BLOG	Depot
PM workorders	X	X	
PP workorders		X	
Manual	X	X	X
Ships - deployed		X	
Internal Preqs/STOs (originator)	X	X	

Anticipated Demand: One which is in advance of the creation of an Actual Demand. This demand type permits the pre-positioning of materiel so that fulfillment rates are substantially increased when the actual demand is eventually created.

Note: PIRs are not currently used at DND but may have a future use

Type of demand	1st line/FMF	2nd line/BLOG	Depot
Reorder Point (min-max)	X	X	X
Forecast (PIRs)	X	X	X

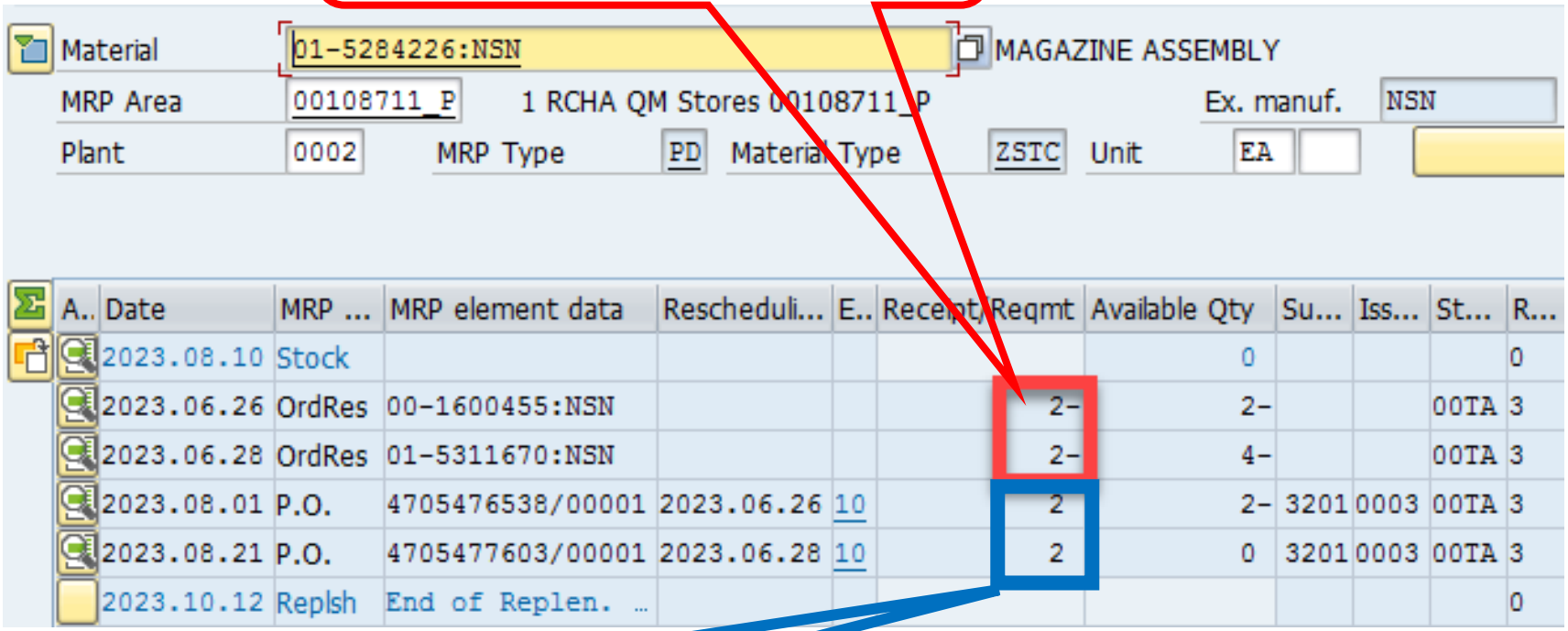
Common forms of supply:

- Quantities in stock
- Purchase Requisitions (PReqs)
- Stock Transport Orders (STOs)
- Purchase Orders (P/Os)
- Schedule Lines (from Scheduling Agreements – rarely used by DND)
- Shipping notifications
- Planned Orders - not currently used, but may have a use in future Materiel Planning & Forecasting (MP&F)

Note: The output of repair workorders are also considered by ECC as supply (e.g. when items are being returned from R&O contracts)

Demand vs Supply in Transaction MD04

Demand = Negative Value



Material	01-5284226:NSN	MAGAZINE ASSEMBLY				
MRP Area	00108711_P	1 RCHA QM Stores 00108711_P			Ex. manuf.	NSN
Plant	0002	MRP Type	PD	Material Type	ZSTC	Unit	EA

A..	Date	MRP ...	MRP element data	Rescheduli...	E..	Receipt/Reqmt	Available Qty	Su...	Iss...	St...	R...
	2023.08.10	Stock					0				0
	2023.06.26	OrdRes	00-1600455:NSN			2-	2-			00TA	3
	2023.06.28	OrdRes	01-5311670:NSN			2-	4-			00TA	3
	2023.08.01	P.O.	4705476538/00001	2023.06.26	10	2	2-	3201	0003	00TA	3
	2023.08.21	P.O.	4705477603/00001	2023.06.28	10	2	0	3201	0003	00TA	3
	2023.10.12	Replsh	End of Replen. ...								0

Supply = Positive Value

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MRP Types

- PD – Standard MRP Type
  - No min or max value

- Z1 – MRP Type for Reorder Points with External Requirements (Min/Max)
  - has a characteristic that PD does not have: the ability to pre-position materiel in advance of actual demand
  - it does this by reacting when the inventory quantity for an item drops below its Reorder Point (i.e. “min”) but will also have visibility to other demands when calculating a replenishment quantity.

- ND – No planning

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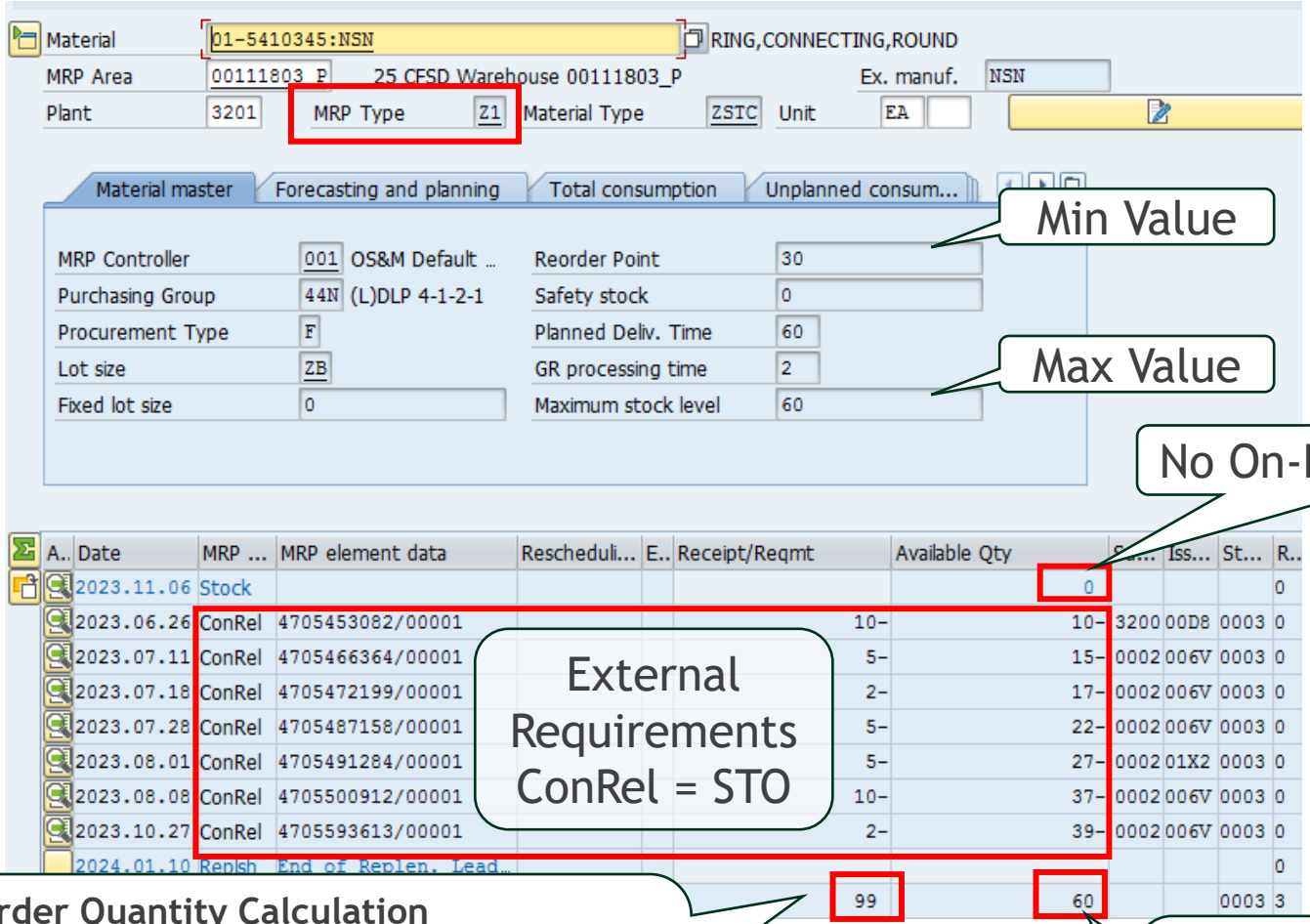
MRP Type = Z1 Example



Order Quantity Calculation
= (max level – in-stock quantity – total On-Order Quantity) + total external requirement quantity
= (60 – 0 – 0) + 39 = 99

Projected end-quantity on hand after external requirements are satisfied (EOH = Max Value)

Activity 3-3

Join at slido.com
Event code: DSC

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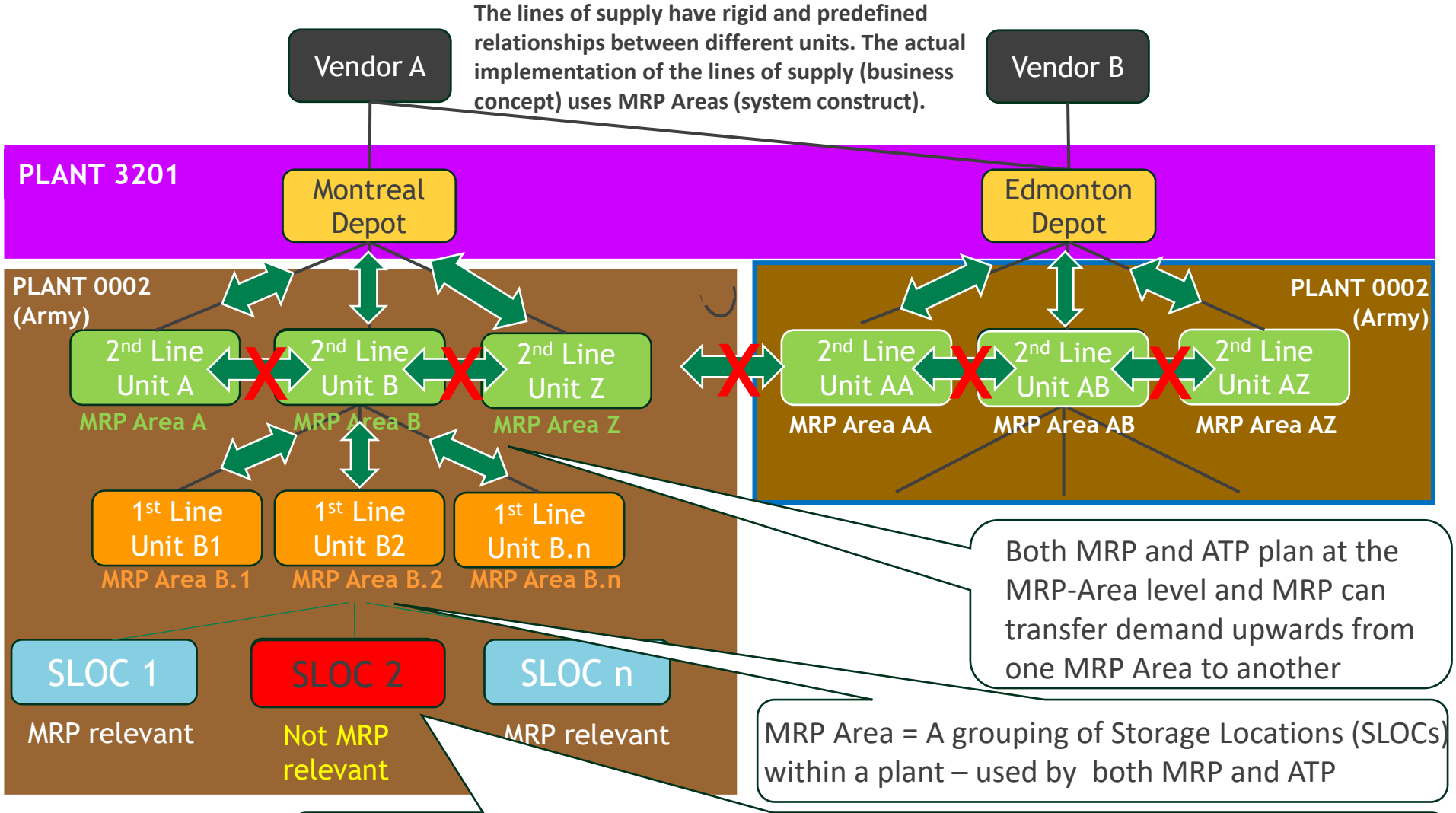
SLIDO #3-3:
Confirm Understanding of Z1 MRP Type

Home Inventory Example:
In your home pantry you want a min/max of 2/4 bags of sugar, and the level drops to 1 bag, but you need 5 additional bags for an upcoming event. If your household pantry inventory was managed by a Z1 MRP type how many bags of sugar would be ordered?

a) One (1)
b) Four (4)
c) Eight (8)
d) Nine (9)

Correct Answer:
(c) {(Max – Quantity in Stock – on-order quantity) + External Requirements} = {(4 – 1 – 0) + 5 } = 8.
If MRP Type = PD (i.e. no min or max value) then answer (b) would be correct:
{Demand – (Quantity in Stock + On-Order)} = {5 – (1 + 0)} = 4

MRP Areas and Lines of Supply – Use by MRP and ATP



Some SLOCs in an MRP Area may be blocked to MRP

- Most commonly MRP-blocked SLOCs are used to store unserviceable materiel
- Both MRP and ATP ignore blocked-to-MRP SLOCs

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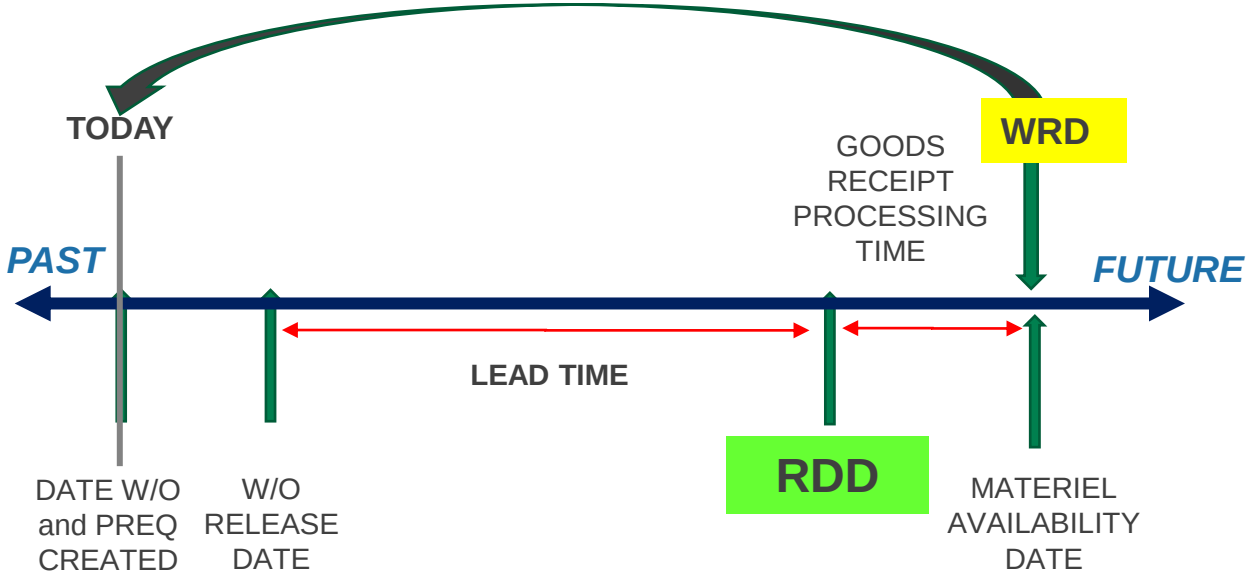
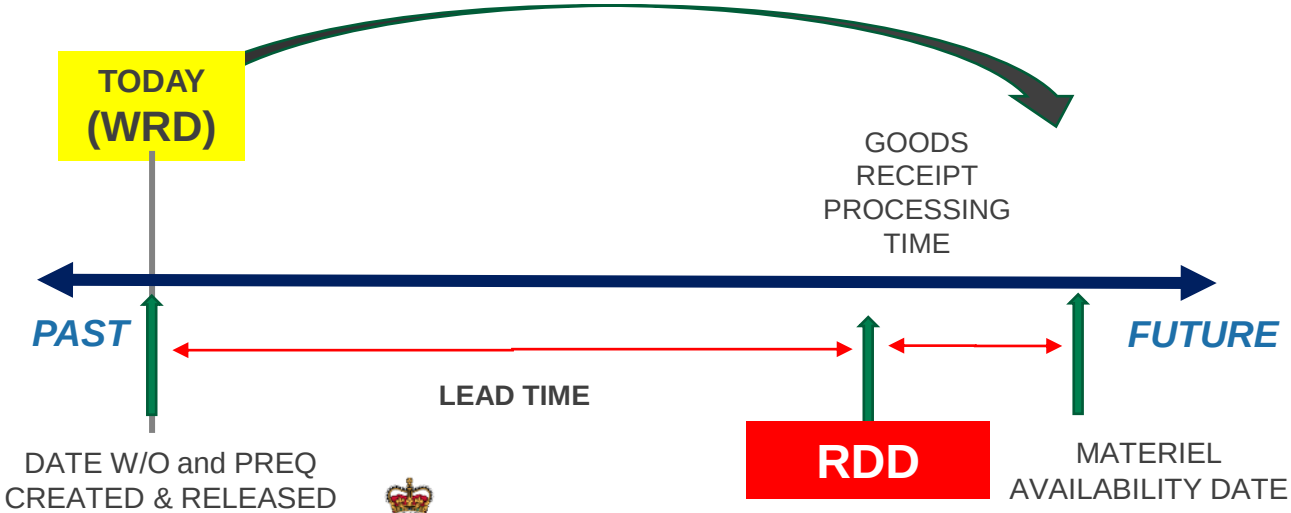
Why WRD and RDD are Mis-Aligned in ECC

MRP will attempt to schedule Order Proposals **in time to meet the demand date**, but this is not always possible (e.g. when the demand date has a shorter timeframe than the time it takes to obtain the material)

Backwards Scheduling (E.G. Preventive Maintenance)



Forward Scheduling (E.G. Corrective Maintenance)



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What MRP Considers in its Calculations

- ✓ All demand elements for a given MRP Area (serviceable material only)
- ✓ All Supply elements for a given MRP Area (serviceable material only)
- ✓ Stock types
- ✓ Master Data:
  - The lead time of the materiel
  - The MRP Type
  - {Other elements}
- ✓ ECC configuration of MRP parameters

- ✗ Quantities committed (or not) by ATP
- ✗ IMA Code and any other custom fields
- ✗ Whether or not a materiel is batch managed or serialized
- ✗ The priority of the demand
- ✗ The priority of supply objects

- ✗ MRP does not carry over supply priorities from one Supply Chain level to another

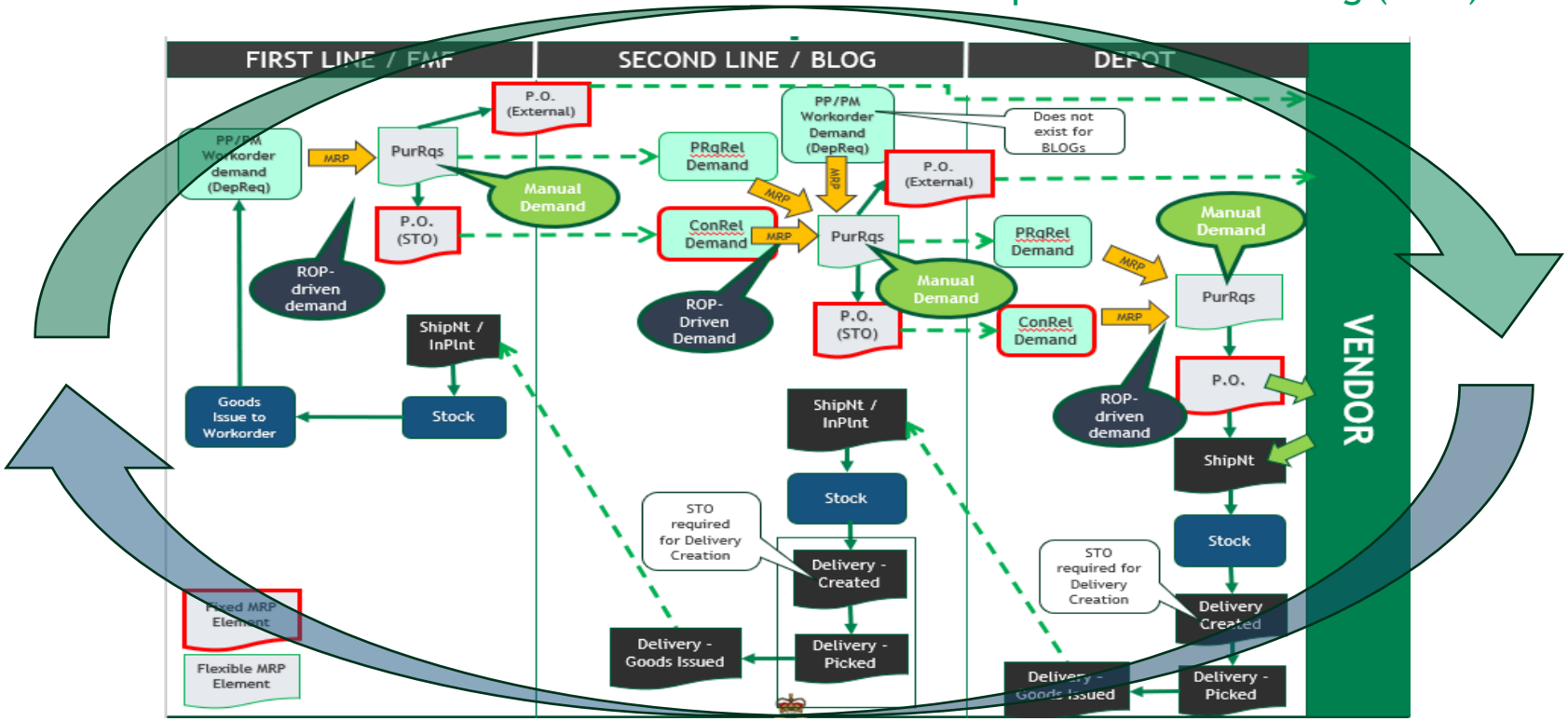
Important Notes:

- Some consider the inability of MRP to "pass on" workorder priorities to supply, or even supply priorities from one supply echelon to another, as being an inadequacy.
- This is a misunderstanding of MRP's purpose. SAP provides another elegant and complementary tool – ATP (Available to Promise) to provide for the capability to distribute materiel to the most important sources of demand.

MRP and ATP are Complementary

MRP's function is to get materiel into stock.

ORDER MANAGEMENT: Main Role - Materiel Requirements Planning (MRP)



ORDER FULFILLMENT: Main Role - Available to Promise (ATP)

ATP's function should be to direct stock to the most critical operational demands first.

Note: Order proposals created by MRP are not hard-linked to the source of demand.

- SAP uses a technique called **"Pegging"** to match supply to demand.
- Pegging should be used by ATP to determine the source and importance of the demand. Materiel can then be distributed then by demand importance.

Module 3
Question & Answer (Part 1)

Join at slido.com
Event code: DSC

Module 3G - DSC Business Execution MAIN TOPICS

A. Core Supply Chain Concepts, Goals and Operation
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D. **Roles & Responsibilities**
E. IT Systems & Tools
F. Enabling the Smooth Flow of Data and Materiel

Learning objectives

Module 3 – DSC Business Execution
Section D. Roles & Responsibilities

At the end of this Section, you will be able to:

- Provide an overview of the different roles involved in the DSC
- Identify key materiel manager actors and describe their main responsibilities

Applicable Definitions (from the SAM)

- **Roles:** functions performed by someone in a particular situation, process, or operation:
  - are the standardized grouping of tasks and responsibilities assigned to individuals *in order to carry out specific functions on behalf of the organization*

- **Responsibilities:** something that one is required to do *as part of a job, role, or legal obligation*

- **Authority:** the legal right to make decisions, transmit intentions to subordinate commanders and impose one's will on subordinates

Levels of DSC Roles

Governance

ADM(Mat) is the SDO for DND/CAF as per Treasury Board Directive for Materiel Management and has functional authority over:

- Materiel acquisition & support, including divestment
- Materiel management and inventory management, including write-off
- Materiel assurance
- Procurement & Contracting
- Controlled Goods
- Project Management policy-held jointly with VCDS

Materiel Managers

Within the DSC Materiel Management includes the decision-making activities necessary to Plan, Acquire, Position, Maintain and Divest of materiel throughout the materiel's lifecycle. A Materiel Manager is a person or organization charged with identifying and coordinating materiel requirements, technical specifications and other elements of life cycle management.

Materiel Custodians

Materiel Custodians are the personnel or organizations charged with the custody, security and stewardship of materiel. Materiel custodians have the materiel physically within their storage locations and warehouses and are generally responsible for the safe keeping, accountability, distribution and reporting of that materiel until it is issued for use or actioned for divestment.

Materiel Users

Materiel Users are the organizations and individuals who either hold and operate military materiel assets or otherwise consume materiel during routine operations.

Activity 3-4

Join at slido.com
Event code: DSC

SLIDO 3-4: Specific DSC Roles

Which DSC role(s) is formally defined in the Supply Administration Manual (SAM)?

a) Supply Manager
b) Supply Technician
c) Life Cycle Materiel Manager
d) Technical Authority
e) Procurement Authority
f) None of the above

Correct Answer is: (a), (d) and (e)

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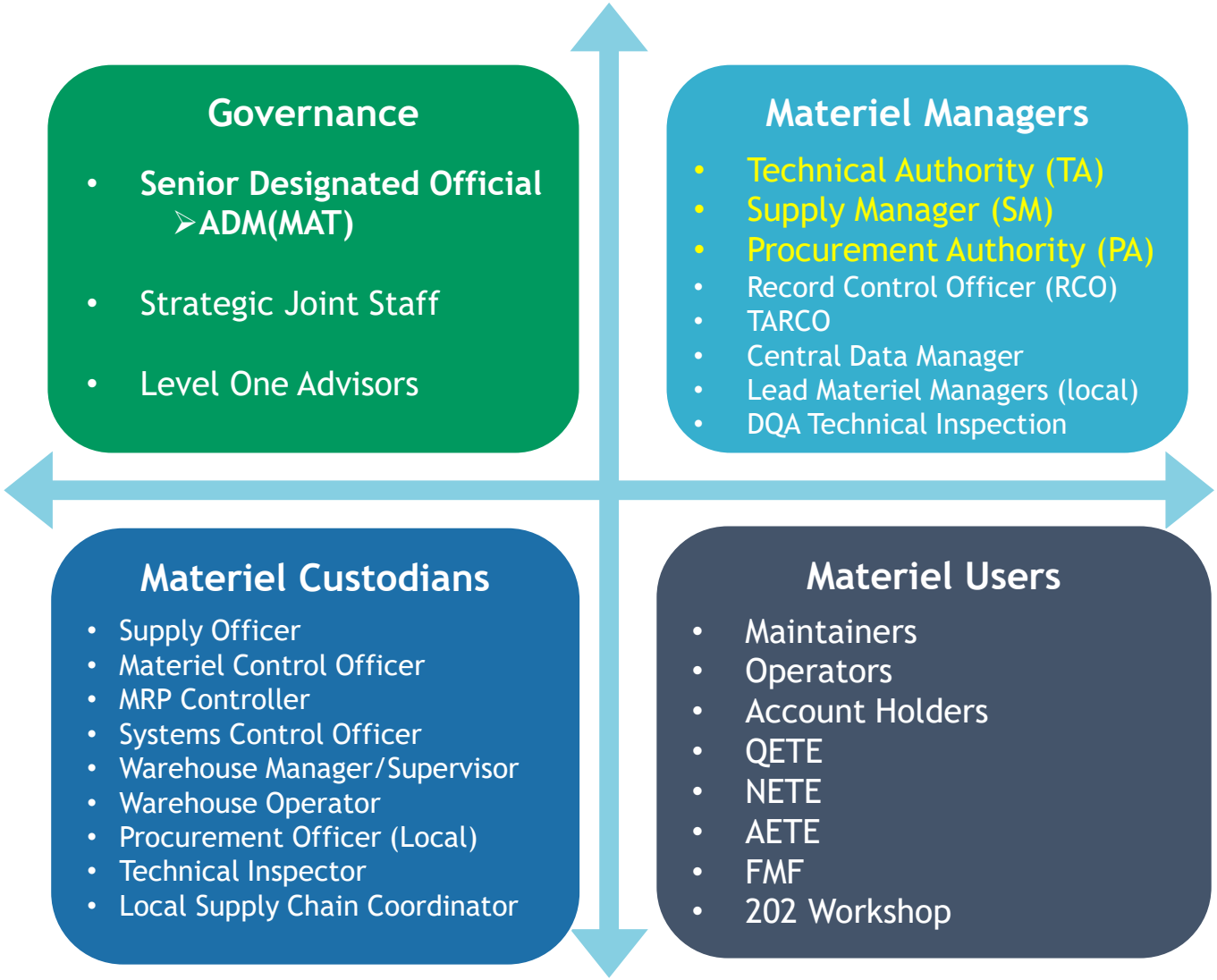
DSC Roles within Levels



Responsibilities and Main Tasks for Key Materiel Management Roles

Responsibilities/Tasks		Technical Authority (TA)	Supply Manager (SM)	Procurement Authority (PA)
Responsibilities		• manages materiel during its in-use life cycle to ensure the right materiel is available for ops • set tech specs and standards • manage configurations • provide technical advice • monitor compliance within their area of responsibility	• manages centrally managed materiel and equipment to ensure the right materiel is in the right location at the right time in the right quantities • work in close conjunction with their PA and TA counterparts.	• execute procurement activities in accordance with the direction and guidance provided within the Procurement Administration Manual (PAM) • enable appropriate materiel management and custodial management after procurement.
Key Tasks	**Materiel Planning**	MI, **MP&F** (Anticipated Update)	**MP&F** (Max and Min levels depots and throughout DSC for all centrally managed materiel), MI	**MP&F** (Budgeting perspective)
	Acquisition	Technical Data Package, FFF	Positioning, procuring (with PA), ASNs, discrepancy management	Ensuring materiel can be received by the depot, PAM Procurement activities
	Materiel Management	Repair authority, shelf life, CFTOs, Serial # tracking, obsolescence	Movement of restricted items, holdings review, dormant stock, High Priority Requests (HPRs)	Dues in, ASN, discrepancy management, proper clauses Note: Procurement must be done in DRMIS MM Module, using the correct Account Assignments
	Maintenance	NIL	Contracts, SNAPS, HPRs/Op Defs	NIL
	Divestment	1303, 4001 Forms, Analysis	Analysis, Action	NIL

SAM Chapter 1.3 Annex B
Technical Support Guide Appendix 1-4-A

Module 3G - DSC Business Execution MAIN TOPICS

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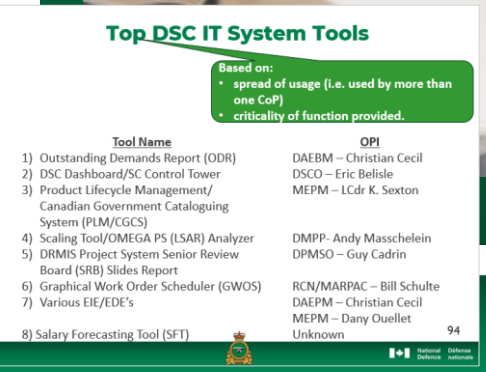
Learning objectives

Module 3 – DSC Business Execution
Section E. IT Systems & Tools

At the end of this Section, you will be able to:

- Describe that the DSC involves more than just an ERP and identify key DSC enabling systems
- Explain how the ODR can be employed as a critical tool for key materiel managers



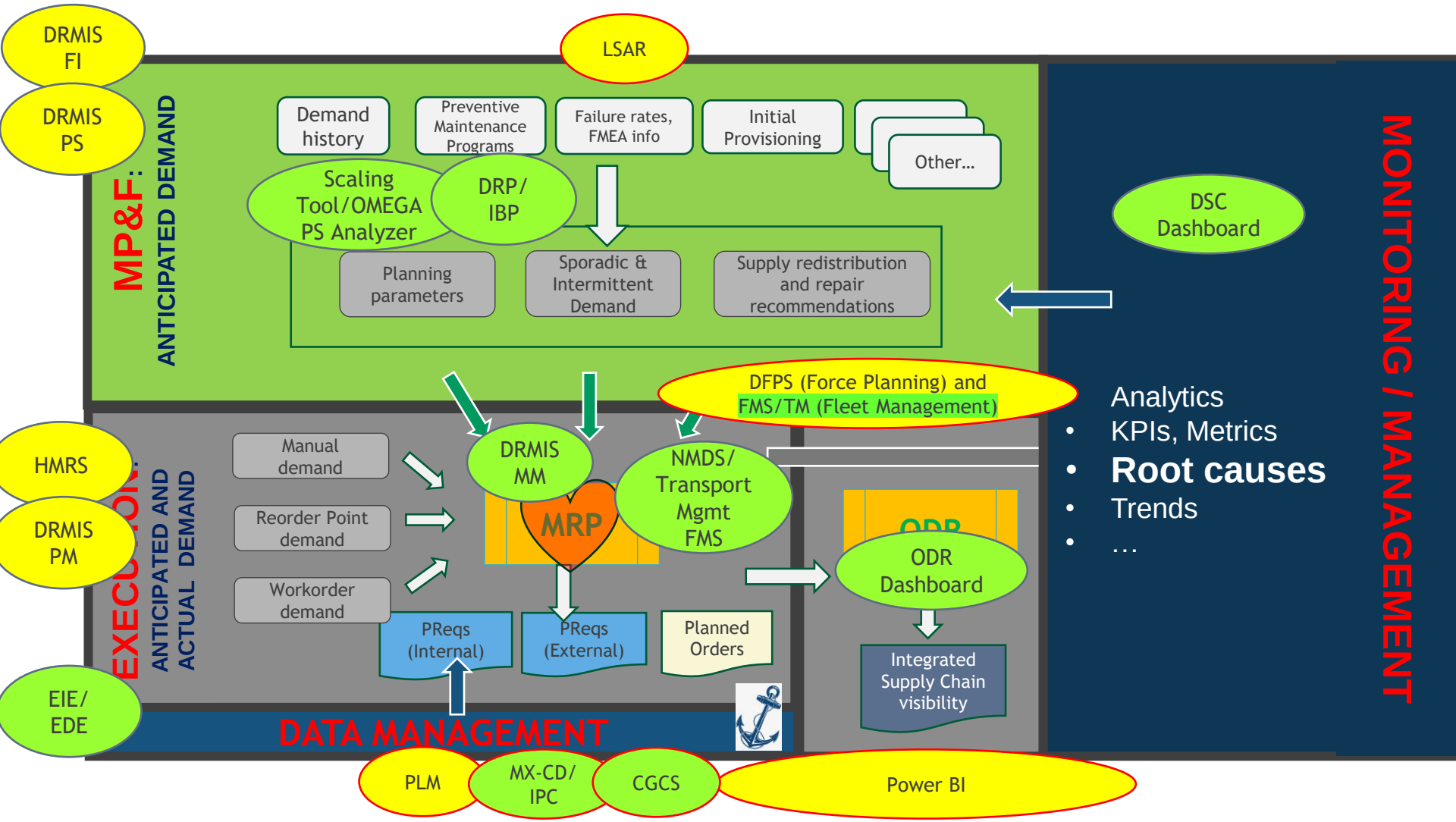
Top DSC IT System Tools

Based on:
- spread of usage (i.e. used by more than one CoP)
- criticality of function provided.

Tool Name	OPI
1) Outstanding Demands Report (ODR)	DAEBM – Christian Cecil
2) DSC Dashboard/SC Control Tower	DSCO – Eric Belisle
3) Product Lifecycle Management/ Canadian Government Cataloguing System (PLM/CGCS)	MEPM – LCdr K. Sexton
4) Scaling Tool/OMEGA PS (LSAR) Analyzer	DMPP- Andy Masschelein
5) DRMIS Project System Senior Review Board (SRB) Slides Report	DPMSO – Guy Cadrin
6) Graphical Work Order Scheduler (GWOS)	RCN/MARPAC – Bill Schulte
7) Various EIE/EDE's	DAEPM – Christian Cecil MEPM – Dany Ouellet
8) Salary Forecasting Tool (SFT)	Unknown

94

System Tools in the DSC and the DSC Model



Bubbles identify IT Systems and Tools. Light green bubbles are the most used by the DSC community of practice.

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Top DSC IT System Tools

Based on:
- **spread of usage (i.e. used by more than one CoP)**
- **criticality of function provided.**

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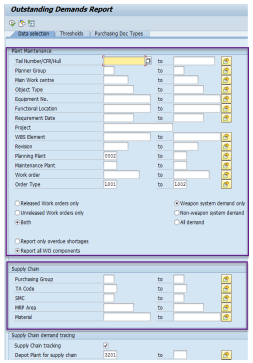
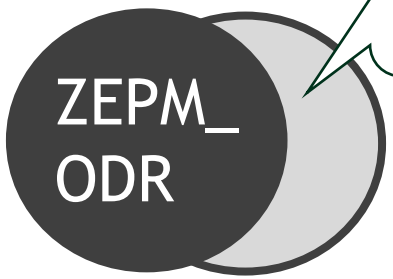
8) Salary Forecasting Tool (SFT)	Unknown

ERP Reporting vs Enterprise Dashboards/Analytics



ERP Reporting



Other T-Code Reports

DRMIS+

Enterprise Dashboards/ Analytics

- Micro (Tactical) View
- Focus on Task execution (Real Time)
- Tactical Performance-Based Tools/Dashboards **(for Working Level)**

- Macro (Strategic) View
- Reveals historical **Enterprise** systemic “pain points” and trends
- Tailored KPIs and Metrics
- **Enterprise** Performance (Executive/Manager/Fleet Level)

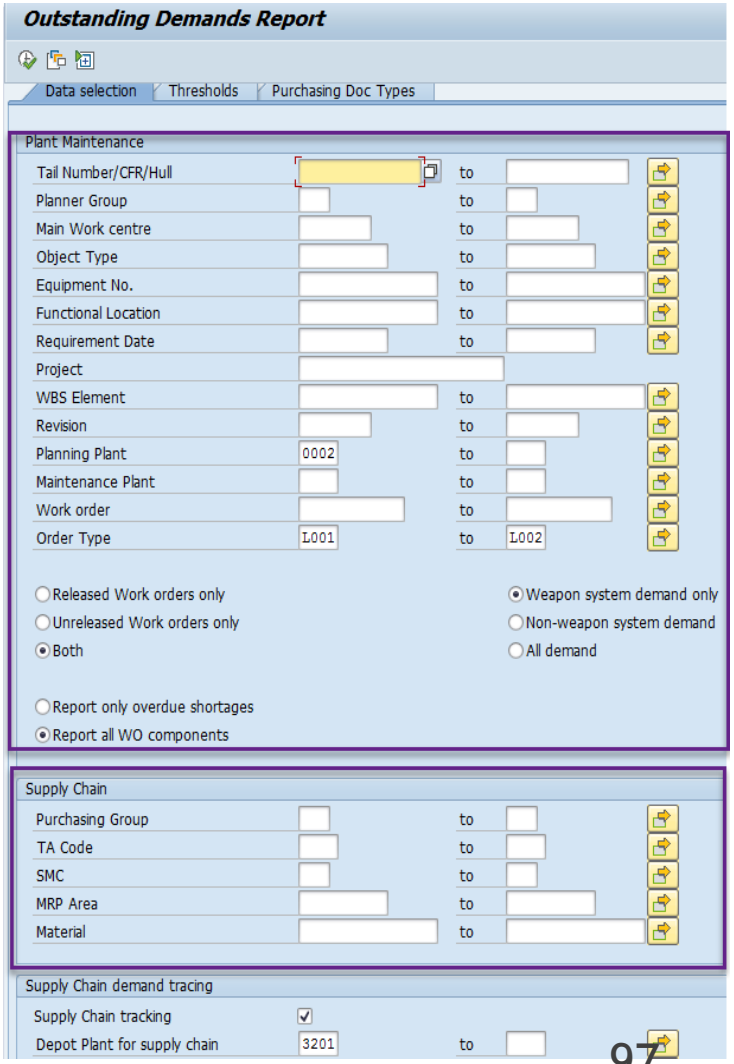
ZEPM_ODR vs Other KEY DRMIS T-Code Reports

T-CODE	TITLE	DESCRIPTION	ZEPM_ODR*
IE36	CFR	Provide list of Fleet Equipment. Equipment data includes general data, serial number, Licence Plate.	YES
IH08	DRMIS EMR	Provide list of Equipment (EMR). Equipment data comprises general data, serial number data, location data.	YES
IW39	RMA W/O (Work Center)	Provide external repair Report of type R01 & R02, by Work Center.	YES
MB25	RESERVATION	Provide Report of Depots Reservations, (Manual Dues-in).	YES
MB51	DEPOTS/RMA HISTORY	Provide Report of Transactions History for Depots (3201), and Repair Material Account (1000).	NO
MB51	USAGE HISTORY	Provide Report of Units Work Orders Usage.	NO
MB52	STOCK ON HAND (SOH)	Provide Report of Warehouse Stocks of Material on hand. Give an overview of the stock balances across different Plants and SLoc for a selected material. It also displays the status (unrestricted, blocked…)	YES
MB5T	STOCK TRANSFER ORDER (STO)	Provide Report of Stock in Transit (STO), To view the stock in transit in various statuses or life cycle stages.	YES
ME2N	PURCHASE ORDER (CONTRACTS)	Provide Report of Purchase Orders of goods, status and cost from a specific Suppliers.	YES
ME5A	PURCHASE REQUISITIONS	Provide Report of Purchase Requisitions, Customer Demands (PDO), Public Service Procurement Canada Orders (PSPC), and Recommended Order Buy (ROB).	YES
MIR5	INVOICES	Provides Report of Invoices from Purchase Orders.	NO
ZE_ME55	COLLECTIVE RELEASE OF PURCHASE REQUISITIONS	Provide Report of Collective release of Purchase Requisitions.	YES
ZEIWBK	RMA WORK ORDER (SLoc)	Provide external repair Report of movement type 261	YES
ZEMM_AGED_PO	PURCHASE ORDER (EDD)	Provide Report of Purchase order Estimated Delivery Date (EDD).	NO
ZSUPSTRIP	DEPOTS MIN/MAX	Provides Report of Depots warehouse stock levels across different Plants and storage locations.	NO
ZSUPSTRIP	DEPOTS MOVING AVERAGE PRICE	Provide Moving Average Price (MavgP), after each acquisition, average unit price is recomputed by adding the price of acquired units to the price of units in inventory and dividing by the new total number of units.	NO
ZSUPSTRIP	DEPOTS SHELF-LIFE EXPIRATION DATE	Provide Report of Depots Shelf-Life Expired items.	NO

*** YES = T-CODE IS COVERED BY ZEPM_ODR; NO = T-CODE IS NOT COVERED BY ZEPM_ODR**

ZEPM_Outstanding Demand Report as a Key Integration Tool for Materiel Managers

- The ZEPM_ODR is a standard DRMIS report that reflects live DRMIS data and enables DSC Actors to:
  - know the status of PReqs/POs regardless of the source of the demand
  - investigate the causes of 20+ different potential bottlenecks in the DSC
  - in many cases take immediate action to remediate bottlenecks including prioritizing actions by importance (e.g. operational impact)
- It is the only DRMIS report that:
  - matches supply to workorder demand
  - is capable of navigating through the Defence Supply Chain (and all the way back) to trace a 1st Line demand to where the fulfillment of the demand currently lies
  - is intended to be used by both the Maintenance and Supply communities
    - provides a common view of the same data
  - Capable of determining the various sources of demand

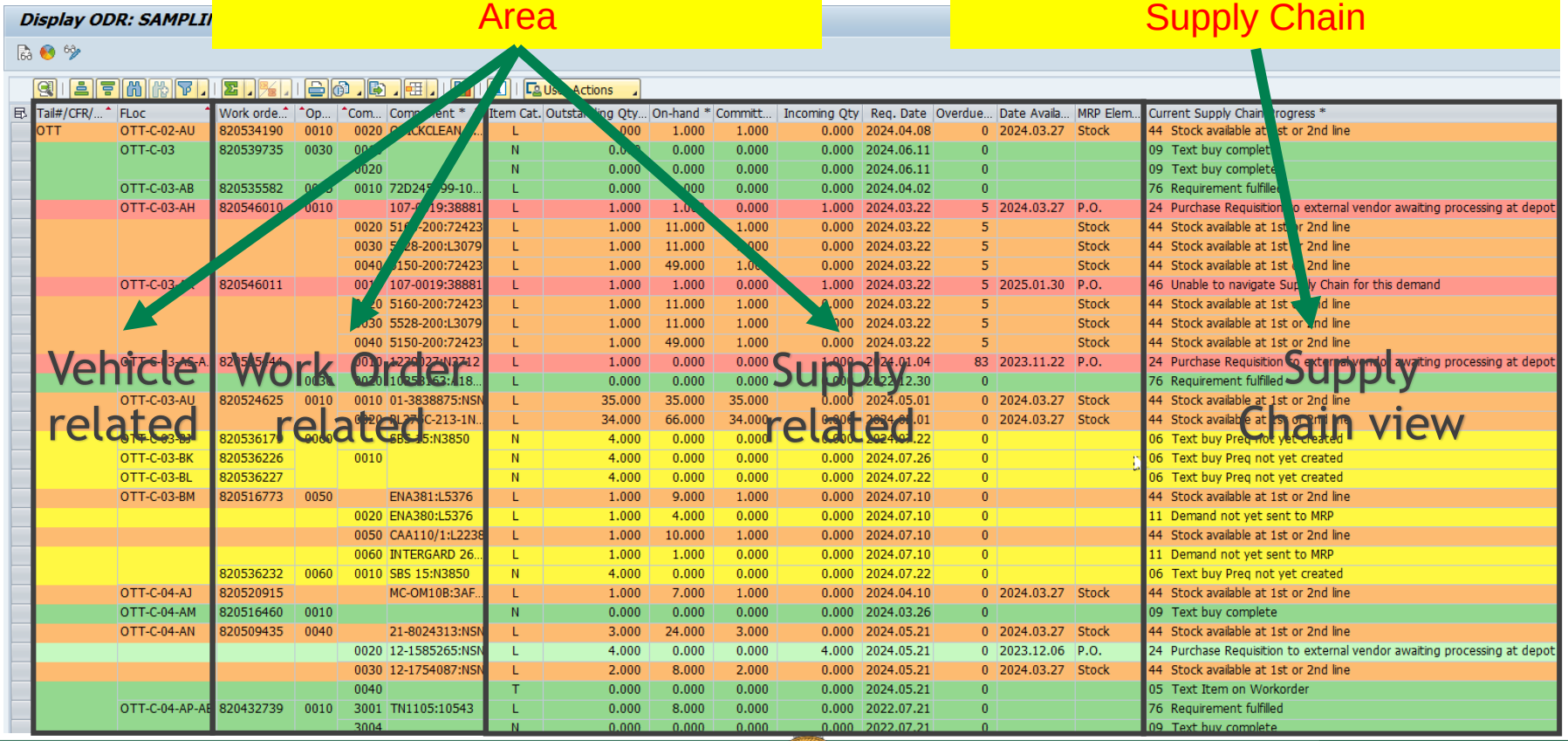


ZEPM_ODR and Integration

The ODR integrates Supply and Demand elements using “pegging”

CROSS-MODULE INTEGRATION (Horizontal)
Integration of data from various areas of ECC for a given MRP Area

INTRA-MODULE INTEGRATION (Vertical)
Bird’s eye view drawn from different MRP Areas that span the Supply Chain



Tail#/CFR/...	FLoc	Work orde...	Op...	Com...	Component *	Item Cat.	Outstanding Qty...	On-hand *	Committ...	Incoming Qty	Req. Date	Overdue...	Date Availa...	MRP Elem...	Current Supply Chain Progress *
OTT	OTT-C-02-AU	820534190	0010	0020	CKCLEAN...	L	000	1.000	1.000	0.000	2024.04.08	0	2024.03.27	Stock	44 Stock available at 1st or 2nd line
	OTT-C-03	820539735	0030	00		N	0.0	0.000	0.000	0.000	2024.06.11	0			09 Text buy complet
				0020		N	0.000	0.000	0.000	0.000	2024.06.11	0			09 Text buy complete
	OTT-C-03-AB	820535582	00	0010	72D245 99-10...	L	0.000	000	0.000	0.000	2024.04.02	0			76 Requirement fulfilled
	OTT-C-03-AH	820546010	0010		107-0 19:38881	L	1.000	1.0	0.000	1.000	2024.03.22	5	2024.03.27	P.O.	24 Purchase Requisition to external vendor awaiting processing at depot
				0020	51 -200:72423	L	1.000	11.000	1.000	0.000	2024.03.22	5		Stock	44 Stock available at 1st or 2nd line
				0030	5 28-200:L3079	L	1.000	11.000	000	0.000	2024.03.22	5		Stock	44 Stock available at 1st or 2nd line
				0040	5150-200:72423	L	1.000	49.000	1.0	0.000	2024.03.22	5		Stock	44 Stock available at 1st or 2nd line
	OTT-C-03-A	820546011		00	107-0019:38881	L	1.000	1.000	0.000	1.000	2024.03.22	5	2025.01.30	P.O.	46 Unable to navigate Supply Chain for this demand
				0	5160-200:72423	L	1.000	11.000	1.000	0.000	2024.03.22	5		Stock	44 Stock available at 1st or 2nd line
				0030	5528-200:L3079	L	1.000	11.000	1.000	0.000	2024.03.22	5		Stock	44 Stock available at 1st or 2nd line
				0040	5150-200:72423	L	1.000	49.000	1.000	0.000	2024.03.22	5		Stock	44 Stock available at 1st or 2nd line
	OTT-C-03-AS-A	820545741		0010	122 027:N3712	L	1.000	0.000	0.000	1.000	2024.01.04	83	2023.11.22	P.O.	24 Purchase Requisition to external vendor awaiting processing at depot
			0030	0020	10358363:418...	L	0.000	0.000	0.000	0.000	2022.12.30	0			76 Requirement fulfilled
	OTT-C-03-AU	820524625	0010	0010	01-3838875:NSN	L	35.000	35.000	35.000	0.000	2024.05.01	0	2024.03.27	Stock	44 Stock available at 1st or 2nd line
				0020	RL27C-213-1N...	L	34.000	66.000	34.000	0.000	2024.01.01	0	2024.03.27	Stock	44 Stock available at 1st or 2nd line
	OTT-C-03-BJ	820536173	0060		SBS 15:N3850	N	4.000	0.000	0.000	0.000	2024.07.22	0			06 Text buy Preq not yet created
	OTT-C-03-BK	820536226		0010		N	4.000	0.000	0.000	0.000	2024.07.26	0			06 Text buy Preq not yet created
	OTT-C-03-BL	820536227				N	4.000	0.000	0.000	0.000	2024.07.22	0			06 Text buy Preq not yet created
	OTT-C-03-BM	820516773	0050		ENA381:L5376	L	1.000	9.000	1.000	0.000	2024.07.10	0			44 Stock available at 1st or 2nd line
				0020	ENA380:L5376	L	1.000	4.000	0.000	0.000	2024.07.10	0			11 Demand not yet sent to MRP
				0050	CAA110/1:L2238	L	1.000	10.000	1.000	0.000	2024.07.10	0			44 Stock available at 1st or 2nd line
				0060	INTERGARD 26...	L	1.000	1.000	0.000	0.000	2024.07.10	0			11 Demand not yet sent to MRP
		820536232	0060	0010	SBS 15:N3850	N	4.000	0.000	0.000	0.000	2024.07.22	0			06 Text buy Preq not yet created
	OTT-C-04-AJ	820520915			MC-OM10B:3AF...	L	1.000	7.000	1.000	0.000	2024.04.10	0	2024.03.27	Stock	44 Stock available at 1st or 2nd line
	OTT-C-04-AM	820516460	0010			N	0.000	0.000	0.000	0.000	2024.03.26	0			09 Text buy complete
	OTT-C-04-AN	820509435	0040		21-8024313:NSN	L	3.000	24.000	3.000	0.000	2024.05.21	0	2024.03.27	Stock	44 Stock available at 1st or 2nd line
				0020	12-1585265:NSN	L	4.000	0.000	0.000	4.000	2024.05.21	0	2023.12.06	P.O.	24 Purchase Requisition to external vendor awaiting processing at depot
				0030	12-1754087:NSN	L	2.000	8.000	2.000	0.000	2024.05.21	0	2024.03.27	Stock	44 Stock available at 1st or 2nd line
				0040		T	0.000	0.000	0.000	0.000	2024.05.21	0			05 Text Item on Workorder
	OTT-C-04-AP-AB	820432739	0010	3001	TN1105:10543	L	0.000	8.000	0.000	0.000	2022.07.21	0			76 Requirement fulfilled
				3004		N	0.000	0.000	0.000	0.000	2022.07.21	0			09 Text buy complete

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Drill-Down Capability/Colour Coding in ZEPM_ODR

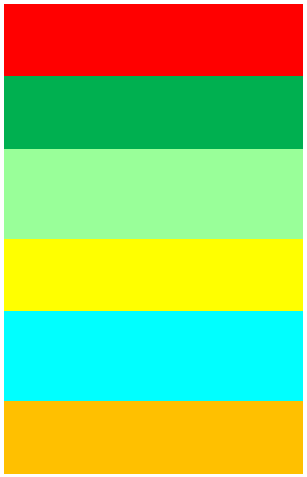
Drill-downs available for any column that contains an asterisk

IW33 MM03 MD04 MMBE ME23N ME53N VL03N Etc.

NAVY

Revision	Revision Txt	Work order *	OpAc	Comp. It	Component *	Item Cat.	Outstanding Qty *	On-hand *	Committed	Incoming Qty	Req. Date	Date Available	MRP Element	Receipts *	Current Supply Chain Progress *
RON23-VA	NAVY R&O Q1 01 ...	820481235	0010	0360	90 [illegible]	L	[illegible]	[illegible]	0.000	1.000	2022.01.13	2022.06.28	InPlnt	018521528/4704083535	MRP Area where work order lies is awaiting
				0370	2[illegible]	L	[illegible]	[illegible]	0.000	1.000	2022.01.13	2022.05.25	PurRqs	00175	Purchase Requisition for local purchase awa
				0380	9[illegible]	L	[illegible]	[illegible]	0.000	1.000	2022.01.13	2022.05.30	P.O.	47049	2nd line awaiting receipt of material from d
		820481399		0010	00-1473392:NSN	L	2.000	2.000	2.000	0.000	2022.06.20	2022.06.15	Stock		Stock available at 1st or 2nd line
				0020	00-8042745:NSN	L	1.000	10.000	1.000	0.000	2022.06.20	2022.06.15	Stock		Stock available at 1st or 2nd line
				0030	00-1395460:NSN	L	2.000	8.000	2.000	0.000	2022.06.20	2022.06.15	Stock		Stock available at 1st or 2nd line
				0040	01-0300235:NSN	L	1.000	3.000	1.000	0.000	2022.06.20	2022.06.15	Stock		Stock available at 1st or 2nd line
			0020	0050	00-4182127:NSN	L	1.000	1.000	1.000	0.000	2022.06.20	2022.06.15	Stock		Stock available at 1st or 2nd line
				0060	00-4182127:NSN	L	1.000-	1.000	0.000	1.000	2022.06.29	2022.06.29	OrdRes	000820481399	
		820481400	0010	0010	00-1473392:NSN	L	0.000	2.000	0.000	0.000	2022.06.06				
				0020	00-8042745:NSN	L	0.000	10.000	0.000	0.000	2022.06.06				
				0030	00-1395460:NSN	L	0.000	8.000	0.000	0.000	2022.06.06				
				0040	01-0300235:NSN	L	0.000	3.000	0.000	0.000	2022.06.06				
			0020	0050	00-4182127:NSN	L	0.000	1.000	0.000	0.000	2022.06.06				
				0060	00-4182127:NSN	L	1.000-	1.000	0.000	1.000	2022.06.15	2022.06.15	OrdRes	000820481400	
		820481401	0010	0010	00-4182128:NSN	L	1.000	0.000	0.000	1.000	2022.06.20	2022.10.04	InPlnt	0185198266/4705006822	MRP Area where work order lies is awaiting
				0020	00-4182128:NSN	L	1.000-	0.000	0.000	1.000	2022.06.27	2022.06.27	OrdRes	000820481401	

COLOUR LEGEND



A shortage exists

The requirement has been fulfilled.

The requirement date is in the future and the supply is projected to meet the requirement date/quantity

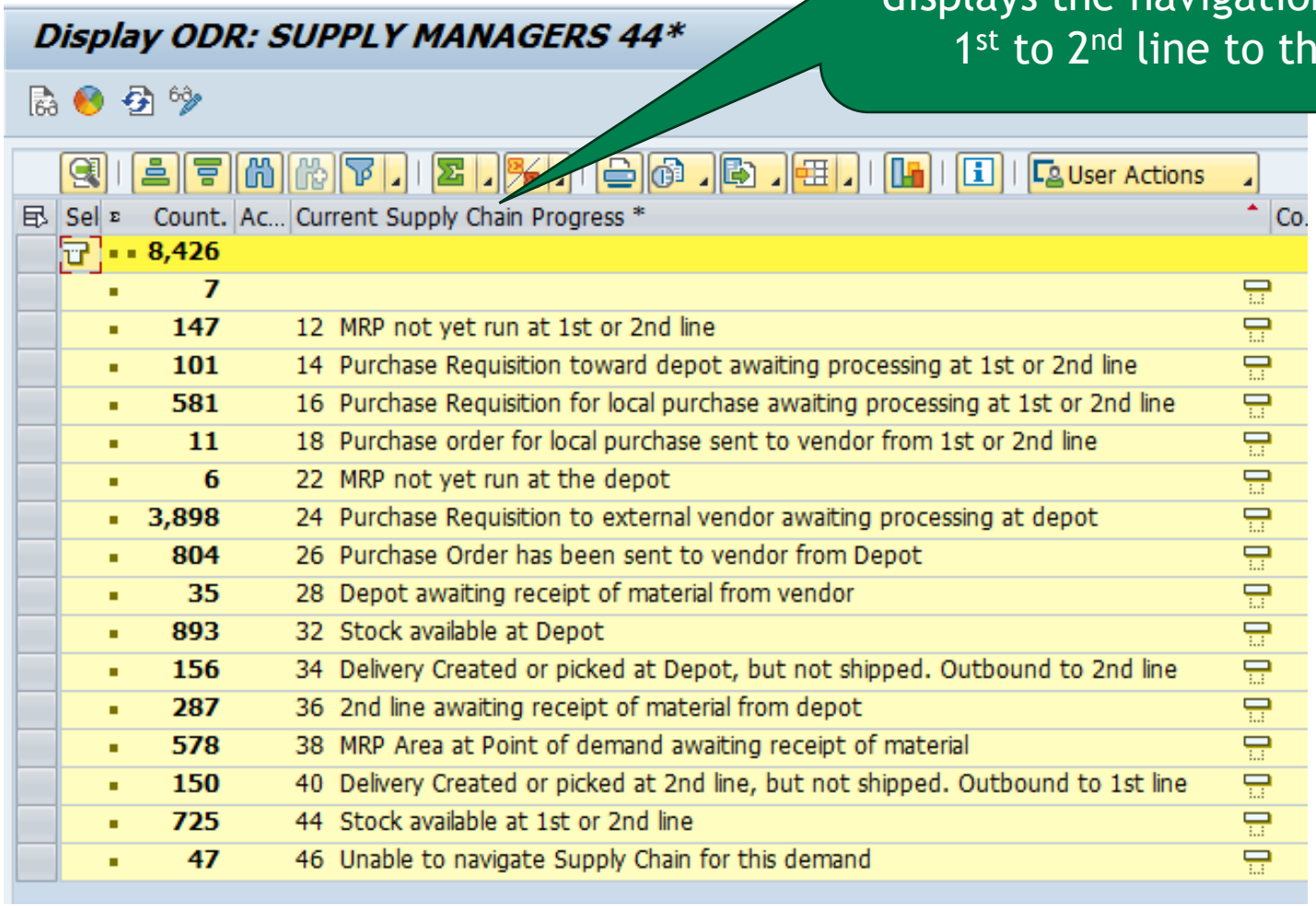
A future shortfall condition exists

These relate to negative quantities defined for components (items to be returned to stock).

The outstanding quantity equals the committed quantity

ZEPM_ODR View of the Defence Supply Chain

Double-clicking on the "Current Supply Chain Progress" column displays the navigation path from 1st to 2nd line to the Depot



Display ODR: SUPPLY MANAGERS 44*

User Actions

Sel	Count.	Ac...	Current Supply Chain Progress *	Co.
	8,426			
	7			
	147	12	MRP not yet run at 1st or 2nd line	
	101	14	Purchase Requisition toward depot awaiting processing at 1st or 2nd line	
	581	16	Purchase Requisition for local purchase awaiting processing at 1st or 2nd line	
	11	18	Purchase order for local purchase sent to vendor from 1st or 2nd line	
	6	22	MRP not yet run at the depot	
	3,898	24	Purchase Requisition to external vendor awaiting processing at depot	
	804	26	Purchase Order has been sent to vendor from Depot	
	35	28	Depot awaiting receipt of material from vendor	
	893	32	Stock available at Depot	
	156	34	Delivery Created or picked at Depot, but not shipped. Outbound to 2nd line	
	287	36	2nd line awaiting receipt of material from depot	
	578	38	MRP Area at Point of demand awaiting receipt of material	
	150	40	Delivery Created or picked at 2nd line, but not shipped. Outbound to 1st line	
	725	44	Stock available at 1st or 2nd line	
	47	46	Unable to navigate Supply Chain for this demand	

ZEPM_ODR Messages and Actions by DSC Actors or Roles

ODR Messages	Supply Manager	Supply Managers (Released PREQs)	NDQAR/ DQA	Procurement Authority	Buyer	TA	EMT	Depot	Material Management Actor	Maintenance Actor	MRP controller
05 Text item on Workorder											
06 Text buy Preq not yet created											
07 Text buy Preq created				LOCAL (Army)	NAVY						
08 Text buy P/O created				LOCAL (Army)	NAVY						
09 Text buy complete											
10 Stock available at point of demand											
11 Demand not yet sent to MRP											
12 MRP not yet run at 1st or 2nd line											
14 Purchase Requisition toward depot awaiting processing at 1st or 2nd line											
16 Purchase Requisition for local purchase awaiting processing at 1st or 2nd line				LOCAL							
18 Purchase order for local purchase Order exists 1st or 2nd line				LOCAL							
20 Stock Transfer Order awaiting processing at 1st or 2nd line											
22 MRP not yet run at the depot		DO NOT RELEASE PREQS (impact on MRP)									
24 Purchase Requisition to external vendor awaiting processing at depot		DO NOT RELEASE PREQS (impact on MRP)									
26 Purchase Order to vendor exists at Depot		RELEASE PReqs WHEN GOODS RECEIPT IS IMMINENT									
28 Depot awaiting receipt of material		PREQS REQUIRE RELEASE									
29 Awaiting non-standard receipt at Depot		PREQS REQUIRE RELEASE									
30 External P/O received but is in quality inspection at the Depot		PREQS REQUIRE RELEASE									
32 Stock available at Depot		PREQS REQUIRE RELEASE					FUTURE?				
34 Delivery Created or picked at Depot, but not shipped. Outbound to 2nd line											
36 2nd line awaiting receipt of material from depot											
37 Awaiting non-standard receipt at 2nd line											
38 MRP Area at Point of demand awaiting receipt of material											
39 MRP Area at Point of demand awaiting non-standard receipt											
40 Delivery Created or picked at 2nd line, but not shipped. Outbound to 1st line											
42 Material received but is in quality inspection at 1st or 2nd line				LOCAL							
44 Stock available at 1st or 2nd line											
46 Unable to navigate the supply chain for this demand											
51 Internal R&O workorder in progress											
52 External R&O workorder in progress											
76 Requirement fulfilled											
99 Not relevant to supply chain – not a demand.											

Colour coding: New messages - 2024 March release

Action: 1) solving the issue in the system or, 2) directs that action be taken or, 3) the person who has responsibility

Monitor = all/any activities not related to "Action". It may include analysis, troubleshooting and any rectification measures to be taken.

Provides assistance - as required, case-by-case

Supply Manager Use Cases (enabled by ZEPM_ODR)

As a Supply Manager I need to:

- be able to work with current (live) transactional data
- know the source, type and importance of a specific demand (e.g. required for ops)
- know what bottlenecks may exist that need action on my part to resolve
- have available all relevant information to assist in making a decision to release a Preq in a timely fashion. This includes:
  - information pertaining to the source and importance of the demand which includes:
    - Whether a vehicle or aircraft is grounded (and including specific aircraft, ship or vehicle#)
    - Days overdue (from the work order's requirement date)
    - The priority of the work order
  - know when my materiel is in available depot stock
  - the MMR's internal comments and technical details
  - ERN-related information
  - the IMA Code of the materiel
- be able to monitor overdue materiel and proactively address potential future shortages
- be able to seamlessly navigate among ECC transactions

ZEPM_ODR Resources

Help:

++DSC Support Desk - Centre de Soutien CAD@ADM(Mat) DSCO@Ottawa-Hull

+LEMS DRMIS Helpdesk@ADM(Mat) DLEPS@Ottawa-Hull

Points of Contact:

- AEPM: Christian Cecil
- LEPM: Steve Cusson
- MEPM: Dany Ouellet/Bill Schulte

Training:

- Currently limited to Supply Manager Course (Guest Lecture)
- ODR institutionalization is a key part of the SDI initiative

Other Resources:

- PPTs available on Request to the above PoCs
- User Manual: Not yet available, but is also part of ODR institutionalization

Module 3G - DSC Business Execution MAIN TOPICS

A. Core Supply Chain Concepts, Goals and Operation
B. Integration in the DSC
C. Materiel Requirements Planning (MRP) Concepts
D. Roles & Responsibilities
E. IT Systems & Tools
F. **Enabling the Smooth Flow of Data and Materiel**

Learning objectives

Module 3 – DSC Business Execution
Section F. Enabling the Smooth Flow of Data and Materiel

At the end of this Section, you will be able to:

- Express, using key use cases, how to enable the smooth flow of data and materiel in the DSC

Activity 3-5

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SLIDO #3-5:
Demand Prioritization – Non-HPR Demands

True or False - At the Depot level, non-HPR demands are satisfied in the order they are received regardless of the importance of the demand.

ANSWER: **TRUE**

- The root cause of this is that for non-HPR items, Program Code related to ATP at the depot does not consider the importance of the demand when determining which demands are to be satisfied; rather, it fulfills demand by the earliest requirement date which essentially means that the earliest demands get satisfied first. This is often referred to as First In First Out (FIFO). So, for example, if two demands for an MMR are received, the first one for a RoP and a following one raised by an operational theatre, the RoP demand is automatically actioned first
- A Business Requirement has been raised to revise the Program Code to take into consideration other importance factors (e.g. requirement to support in-theatre or deployed operations, requirement to make an operational system serviceable, etc)

Case Study 2/4:
Inability of Depots to Ship Materiel that is In Stock

Restricted Items (previously IMA Code 1*) require the approval of a Supply Manager or Technical Authority to release them

Other related root causes of this condition are:

- Unreleased PReqs cannot be converted to STOs.
- Depots can create Deliveries to ship materiel only against STOs, not Preqs.
- Although a system tool exists to identify (and release) PReqs in a timely manner (e.g., when stock exists) it does not have widespread use

NOTE: The ODR provides functionality that enables applicable actors to expeditiously resolve many of the root causes.

Case Study 3/4: Inability to prevent external purchasing of materiel when stock already exists in DND

There are several permutations of this:

- Materiel is often purchased for common stock when, in fact, project stock exists within DND
- The reverse of the above
- Materiel is often purchased for a depot when another depot has stock
- Materiel is often purchased when repairable stock exists

Root cause: a simple lack of visibility to stock that may be available elsewhere in DND prior to initiating external procurement.

SDI: Example of information related to stock available elsewhere

25 CFSD has stock available, 7 CFSD has demand from Operations.
The system would inform the user of this condition.

Component *	Depot: MRP Area Desc.	Demand Source	Co...	IMA	Component Text	Work order *	Outstandin...	Current Supply Chain Progress *
00-4453903:NSN	25 CFSD Warehouse 0...	PM Order	0002	1Z	SEAL,CONICAL,F...	1103033419	8.000	32 Stock available at Depot
						1103031951	8.000	32 Stock available at Depot
						1103031975	8.000	32 Stock available at Depot
						1103032401	8.000	32 Stock available at Depot
						1103032416	8.000	32 Stock available at Depot
						1103032446	8.000	32 Stock available at Depot
						1103032447	8.000	32 Stock available at Depot
						1103033471	8.000	32 Stock available at Depot
						1103025385	2.000	32 Stock available at Depot
		Reorder Point					27.000	26 Purchase Order to vendor exists at Depot
		Stranded					2.000	26 Purchase Order to vendor exists at Depot

Component *	Depot: MRP Area Desc.	Demand Source	Co...	IMA	Component Text	Work order *	Outstandin...	Current Supply Chain Progress *
00-4453903:NSN	7 CFSD MAIN Warehou...	PM Order	3200	1Z	SEAL,CONICAL,F...	1103026877	8.000	24 Purchase Requisition to external vendor awaiting processing at depot
						1103026950	8.000	24 Purchase Requisition to external vendor awaiting processing at depot
						1103026921	8.000	24 Purchase Requisition to external vendor awaiting processing at depot
						1103027004	0.000	24 Purchase Requisition to external vendor awaiting processing at depot
						1103027004	8.000	24 Purchase Requisition to external vendor awaiting processing at depot
						1103026957	8.000	24 Purchase Requisition to external vendor awaiting processing at depot
						1103026922	8.000	24 Purchase Requisition to external vendor awaiting processing at depot
						1103026861	8.000	24 Purchase Requisition to external vendor awaiting processing at depot
						1103026806	6.000	24 Purchase Requisition to external vendor awaiting processing at depot
						1103026812	8.000	24 Purchase Requisition to external vendor awaiting processing at depot
						1103026818	8.000	24 Purchase Requisition to external vendor awaiting processing at depot
						1103028310	8.000	24 Purchase Requisition to external vendor awaiting processing at depot
						1103028315	8.000	24 Purchase Requisition to external vendor awaiting processing at depot
						1103028322	0.000	24 Purchase Requisition to external vendor awaiting processing at depot
						1103028322	8.000	24 Purchase Requisition to external vendor awaiting processing at depot

Demand from Operations

Case Study 4/4: Inability to Consolidate Supply Objects as Demands Move Up the DSC

- Standard SAP has an out-of-the-box capability to perform period-based lot sizing.
- When this technique is used, multiple demands are consolidated into a single procurement object (a Preq)
- The consolidation of supply results in much fewer picks, packaging and goods issues and goods receipts transactions. In some cases, this could result in a 90% reduction of materiel handling and transaction costs.

Root cause: The premature conversion of Preqs to stock transport orders prevents MRP from using period-based lot sizes.

Consequence of not using Period-based Lot-Sizing

- Multiple picks of the same materiel (or disaggregation is required post-pick)
- Requires multiple packages for the same materiel destined for a specific destination
- Multiple goods receipts required at receiving destination

Material 20-0059240:NSN CABLE ASSEMBLY,SPECIAL PURPOSE,ELECTR
MRP Area 00111803_P 25 CFSD Warehouse 00111803_P Ex. manuf. NSN
Plant 3201 MRP Type PD Material Type ZSTC Unit EA

A..	Date	MRP e...	MRP element data	Resch...	E..	Receipt/Reqmt	Available Qty	Su...	Iss....	Sto...	R...
	2020.10.23	ConRel	4704302397/00001			1-	12-	0002	00OM	0003	0
	2020.10.23	ConRel	4704302399/00001			1-	13-	0002	00OM	0003	0
	2020.11.17	ConRel	4704342851/00001			1-	14-	0002	00OM	0003	0
	2020.11.17	ConRel	4704342852/00001			1-	15-	0002	00OM	0003	0
	2020.12.01	ConRel	4704356966/00001			1-	16-	0002	00OM	0003	0
	2020.12.04	ConRel	4704359423/00001			1-	17-	0002	010J	0003	0
	2021.01.19	ConRel	4704390444/00001			1-	18-	0002	010J	0003	0
	2021.02.09	ConRel	4704420691/00001			1-	19-	0002	00OM	0003	0
	2021.04.08	ConRel	4704530367/00001			11-	30-	0002	010W	0003	0
	2021.04.09	ConRel	4704530360/00001			1-	31-	0002	00OM	0003	0
	2021.04.09	ConRel	4704530361/00001			1-	32-	0002	00OM	0003	0
	2021.04.09	ConRel	4704530362/00001			1-	33-	0002	00OM	0003	0
	2021.04.09	ConRel	4704530363/00001			1-	34-	0002	00OM	0003	0
	2021.04.09	ConRel	4704530364/00001			1-	35-	0002	00OM	0003	0
	2021.04.09	ConRel	4704530365/00001			1-	36-	0002	00OM	0003	0
	2021.10.13	PRqRel	0017264348/00010			4-	40-	0002	010W	0003	0

Summary - Why Are We Here?

- Foundational knowledge is key to the enablement of the DSC mission and vision
- The DSC exists both as a concept (e.g. model) and as a physical entity – both aspects are enabled by an ERP and associated applications to support military operations
- Properly configured DSC Tools, ensures compliance and the audit trail comes as a free by-product

Key Takeaways

A. Core Supply Chain Concepts, Goals and Operation

The DSC at its core (concept plus enablement), is powered by an instance of an SAP-based ERP called DRMIS and what you do as DSC practitioners at the operational / tactical level have strategic implications.

B. Integration in the DSC

The efficient and effective operation of the DSC is greatly diminished without integration in all its forms: Intra-Module; Cross-Module; Cross-Application; and Business Process

C. Materiel Requirements Planning (MRP) Concepts

MRP, which balances supply and demand, is the heart of a Supply Chain.

D. Roles and Responsibilities

The DSC involves many actors that must work together within defined roles to enable the right materiel to be delivered to the right location, in the right condition, in the right quantity and at the right time.

E. IT Systems and Tools

The DSC is made up of many systems and tools – the Outstanding Demands (ZEPM_ODR) report is the only DRMIS report that matches supply to workorder demand and is capable of navigating through the Defence Supply Chain while reflecting live DRMIS data.

F. Enabling the Smooth Flow of Data and Materiel

You are part of the DSC capability. Accurate Execution has downstream effects which makes YOU a critical enabler of Operational Effectiveness.

Module 3:
Question & Answer (Part 2)

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Event code: DSC

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Additional References/Information

- Defence Supply Chain Governance Charter – Version 3.0 (Jan 2020)

  Note: this is currently undergoing a major update
- VCDS Open Letter to L1s (Oct 2020)
- Modernization & Integration of Sustainment and Logistics Share Point
- Supply Administration Manual, 7.1 REPAIR AND MAINTENANCE OF MATERIEL, Annex A
- Technical Support Guide, Appendix 10-4-A Outstanding Demands Report

End of Module 3

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Lunch
60 Mins

Module 4

DSC Analytics

Eric Belisle

Supply Chain Analytics Manager

DSCO 8

Défense nationale National Defence

Modules Summary

1. Government of Canada Direction
2. Departmental Policy
3. DSC Business Execution
4. **DSC Analytics**
5. Reporting

Module 4 - DSC Analytics

Learning objectives

At the end of this module, you will be able to:

- Identify what analytics is
- Identify data and what is required to produce analytics
- Explain DSC analytics products and know how to use them

Activity 4-1

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Module 4 - DSC Analytics

Main Topics:

1. What is analytics
2. How analytics are built
3. How you can use analytics

Topic #1: What is Analytics

In this stage of the module, we will cover:

- What defines analytics?
- The difference between reporting and analytics
- How does analytics apply within DND?

What is Analytics?

[…] military leaders rely heavily on rational/logical models for planning and executing missions. Once the action starts, there may not be time to gather and analyze data in order to make adjustments to planned strategy. Intuitive decision making based on experience under time pressure is often the only alternative to making no decision at all.

Crafting a Data-Driven Culture

To truly unlock the power of Business Analytics, it's crucial for organizations to **cultivate a data-driven culture**. This entails fostering an environment where **data is seen as a strategic asset** and **decisions are guided by evidence** rather than gut feelings.

By contrast, if you make a business decision to commit resources to a new project based on "gut feeling" and not on analysis of projected costs and benefits, you are likely to make some very expensive mistakes.

Willian Adkins, The Disadvantage of Mixing Decision Support Models

Go Deeper

See SAM 1.4 and DSC Analytics Strategy Link

Reporting VS Analytics

Standard ERP Reporting

- Micro (Tactical) View
- Focus on Task execution
- Reporting scope is limited
- Tactical Performance

Enterprise Analytics

- Macro (Strategic) View
- Reveals Enterprise “pain points”
- Tailored KPIs and Metrics
- Enterprise Performance

DSC Analytics Integrated view

- Enables Planning
- Task Prioritization
- Oversight (Where to focus)

SM LCMM PA

Planning

Warehousing		Maintenance		Acquisition		Divestment	
ME5A	MMBE	IP01	IW21	ME41	ME51N	MC46	MC50
MD04	LS26	IP04	IA05			MMBE	
LX02	ZSUPS TRIP	IA07	IP10				
MB51	ZEPM_ ODR	IW31	MMBE				
		IW31	ZEMM_R O_Mana ged				

Execution

Demand Management		Acquisition		Warehousing		Maintenance	
ZEPM _ODR	MB25	ZEPM _ODR	ZE_COL OG_PR	ME21N	MM02	CV01	CV02
ME54N	MM02	ME41	ME21N	MM03	IH08	CV03	CV04
MM03	CV01N	ME31	MIGO	MMBE	ME23N	MM_RO_ MANAGE D	SNAPS
ZE_ME 28	ME23N	MIRO	ME57	MB52	ZE_MM- EXTEND		
ZEMM_OR DER_MON ITOR	ME5A	ME23N	MB21	QM T-CODES			

ECC

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Module 4 - DSC Analytics

Main Topics:

1. What is analytics
2. How analytics are built
3. How you can use analytics

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Topic #2: How analytics are built

In this stage of the module, we will cover:

- The different dimensions of data
- How we transform data into analytics
- How we can visualize the analytics

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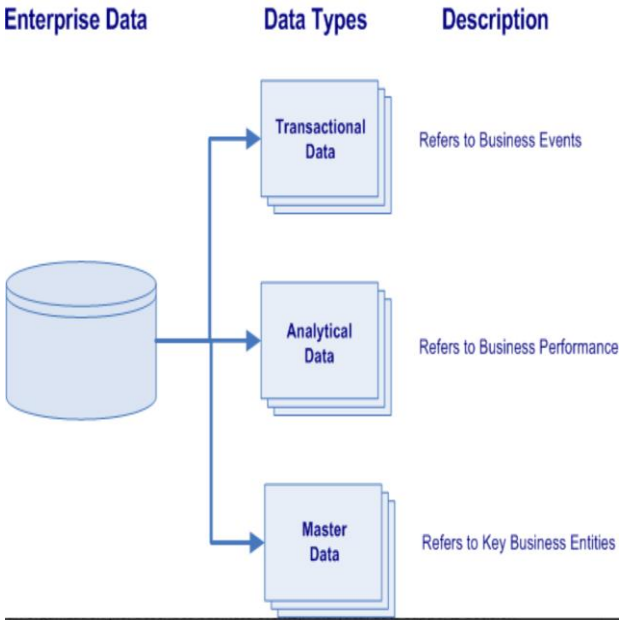
There are multiple dimensions to data



Master Data

Master Records
System Configuration

Transactions

T-Codes used (Process)

Analytics

Data Warehouse/Lake

The analytics dimension provides the numerical values, metrics, and measurements that provide business intelligence and support organizational decision making

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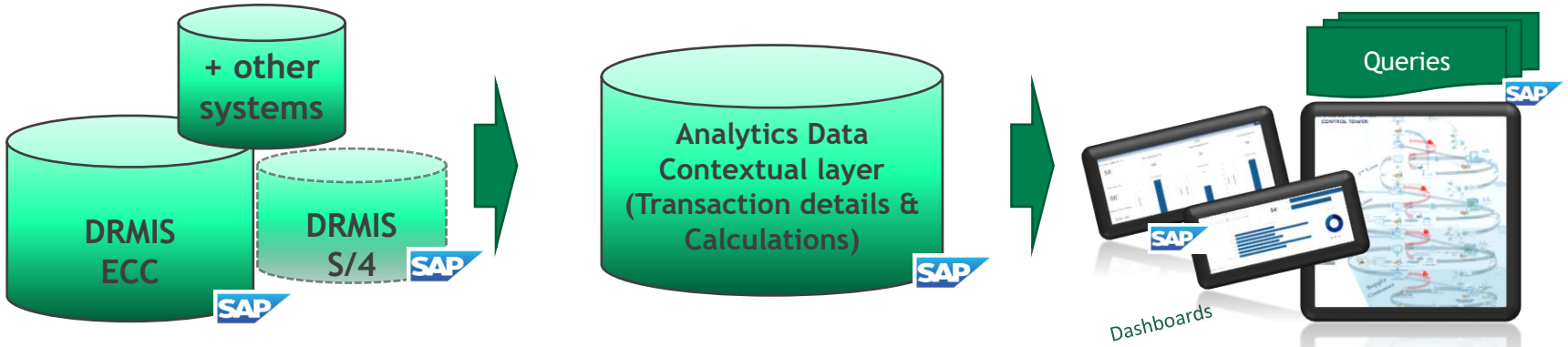
Data flow – how the magic happens

Transactional Data & Systems	DSC Analytics - **E2E Visibility & Context**	
	SAP BW - Data Warehouse	Analytics Output

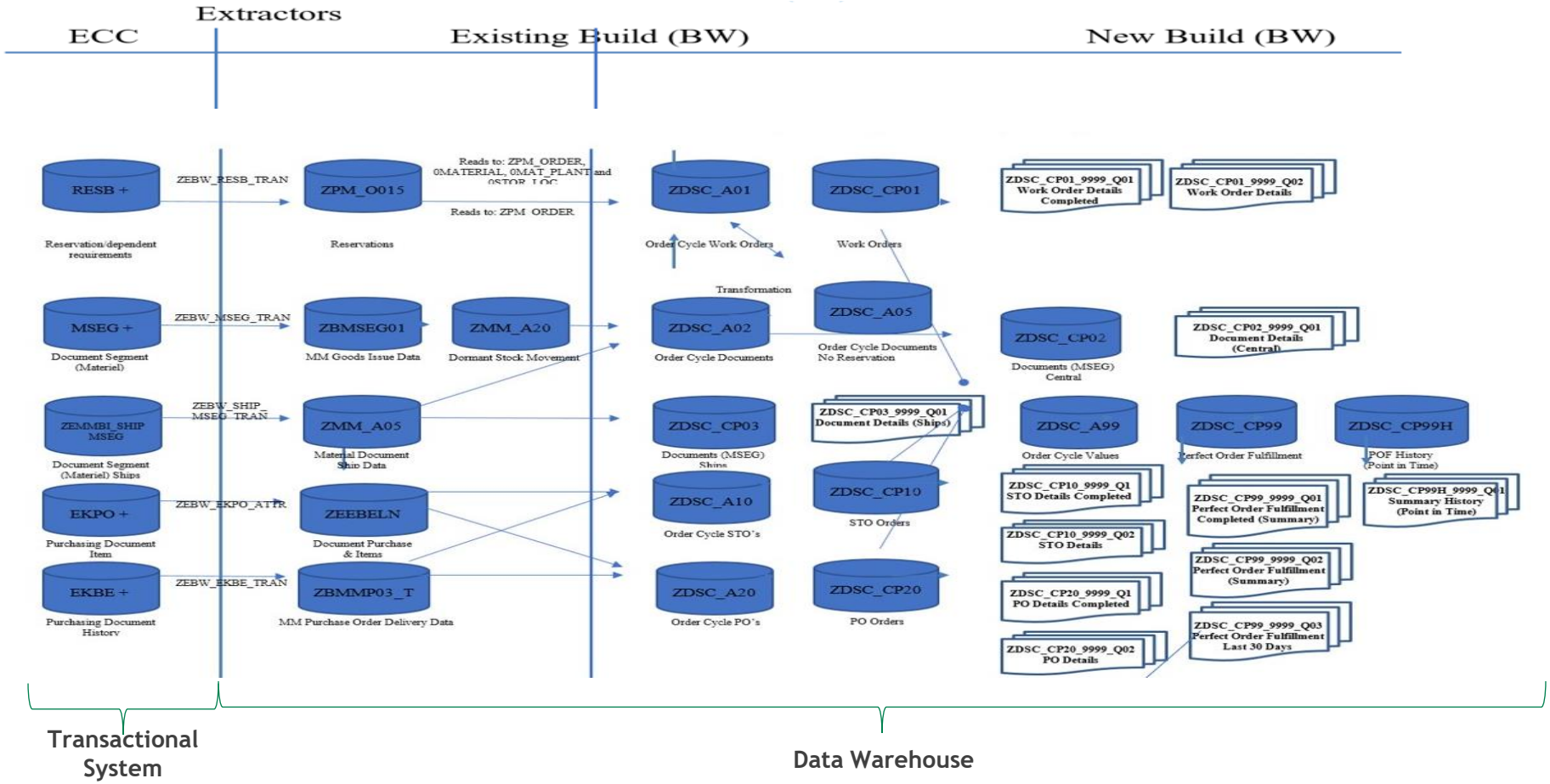


DSC Transformation	Future Proofed & Ready for System Upgrades

DSC Analytics

- Enterprise DSC Business Intelligence
- Business context based on system transactions
- Analytic Data architecture compatible with S4 future upgrades
- Reveals Enterprise pain points to support DSC Transformation

Data structure and availability



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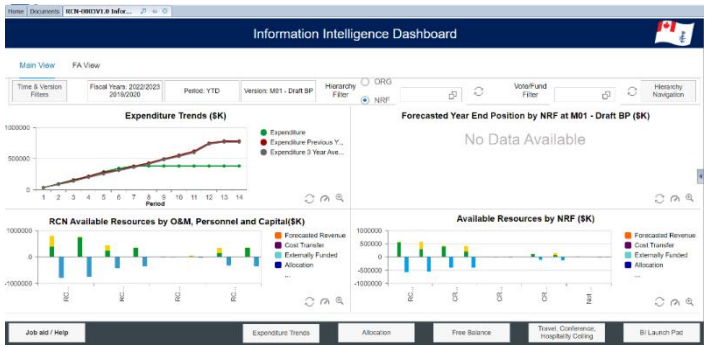
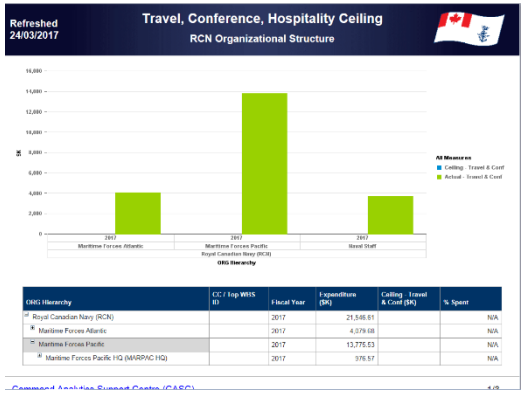
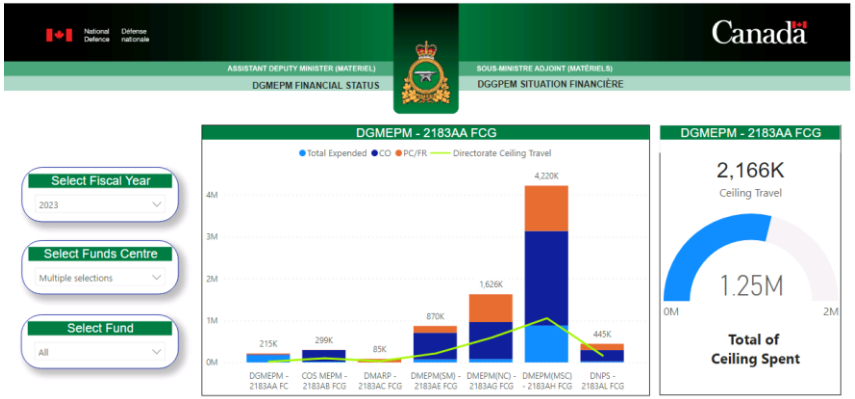
Various visualization tools / Output



SAP BOBJ Lumira



SAP BOBJ WEBI



MS PowerBI

131

Module 4 - DSC Analytics

Main Topics:

1. What is analytics
2. How analytics are built
3. How you can use analytics

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Activity 4-2

Join at slido.com
Event code: DSC

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Topic #3: How you can use analytics

In this stage of the module, we will cover:

- DSC Analytics Products
- DSC Analytics Dashboards
- Advanced Analytics

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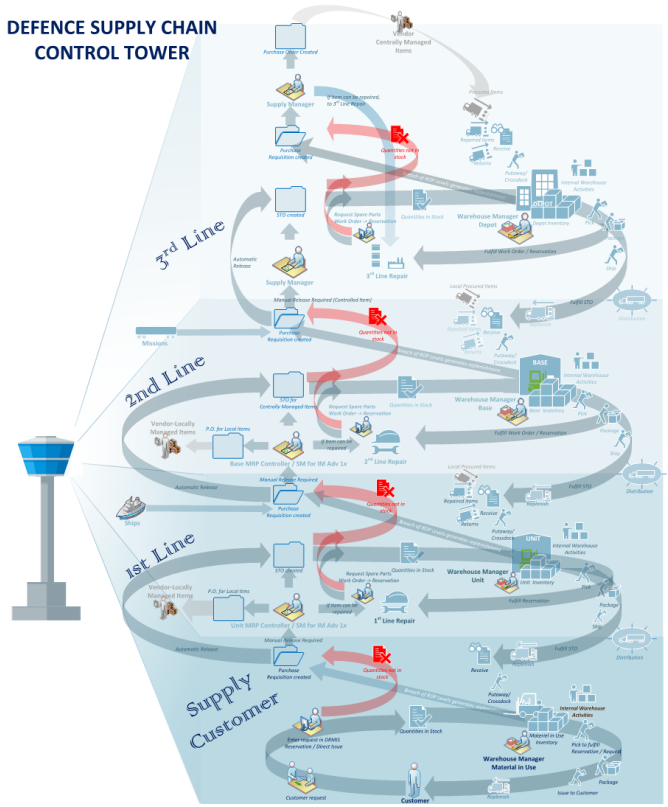
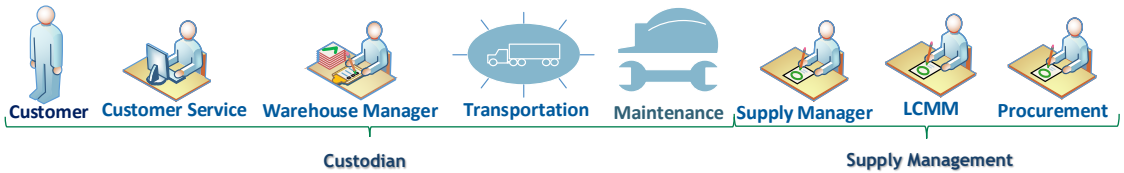
DSC Analytic Products

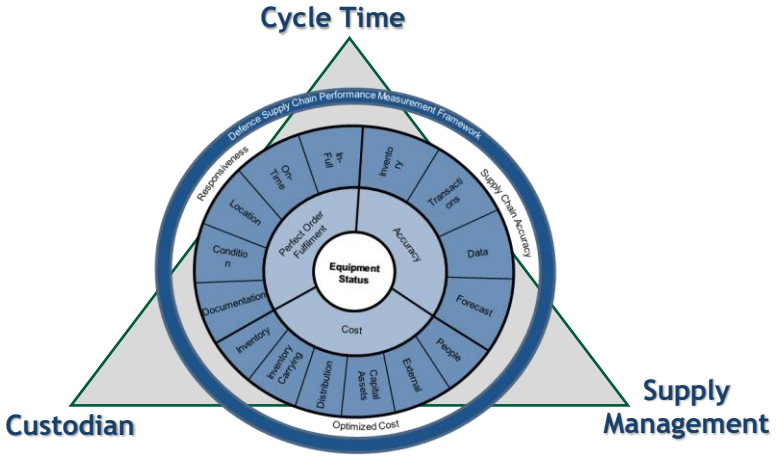
DSC Configuration



DSC Functions

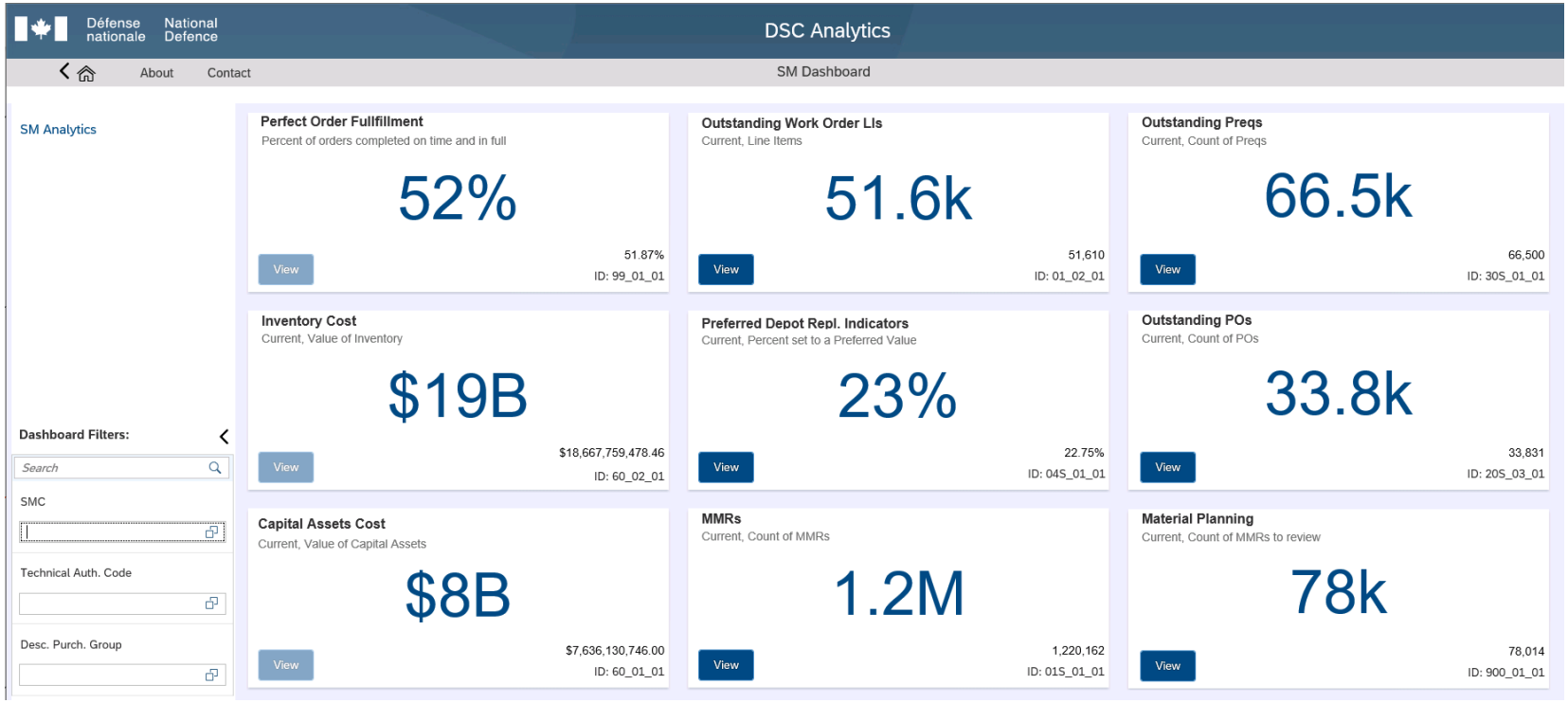


DSC Analytic Products



- ✓ **PMF.** Provides a benchmarking capability to track DSC performance.
- ✓ **Supply Management Dashboard.** Provides EPMs with consolidated information to manage centralized Supply Management activities.
- ❑ **Custodian Dashboard.** Provides DSC end-users with a consolidated view of what is required to manage their activities.
- ❑ **Cycle Time.** Provides E2E DSC visibility and analytics for strategic decisions **(RESILLIENCY / DSC EFFECTIVENESS).**

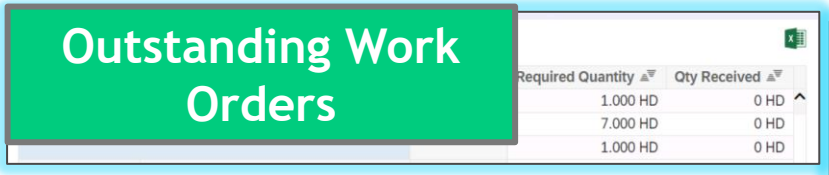
DSC Analytics Material Management Dashboard



DSC Analytics Training Packages & Calendar

DSC Analytics Material Management Dashboard

Outstanding Work Orders



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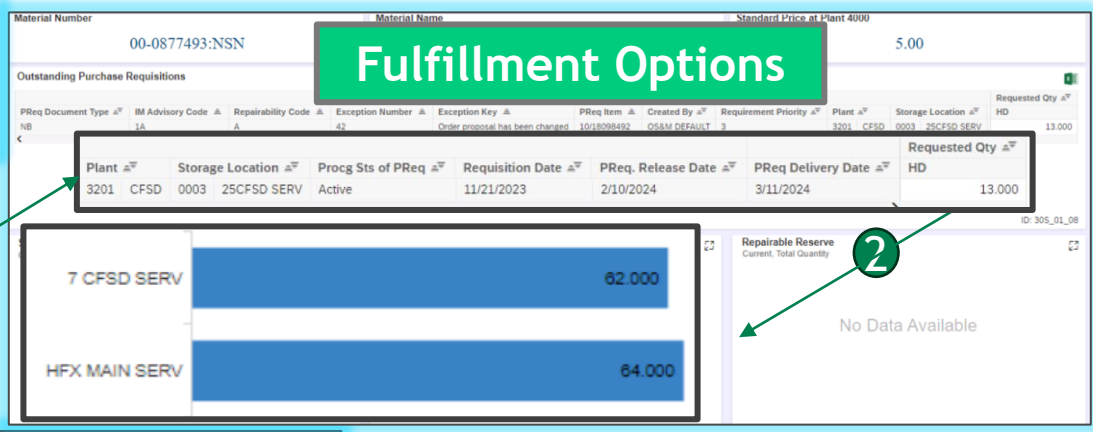
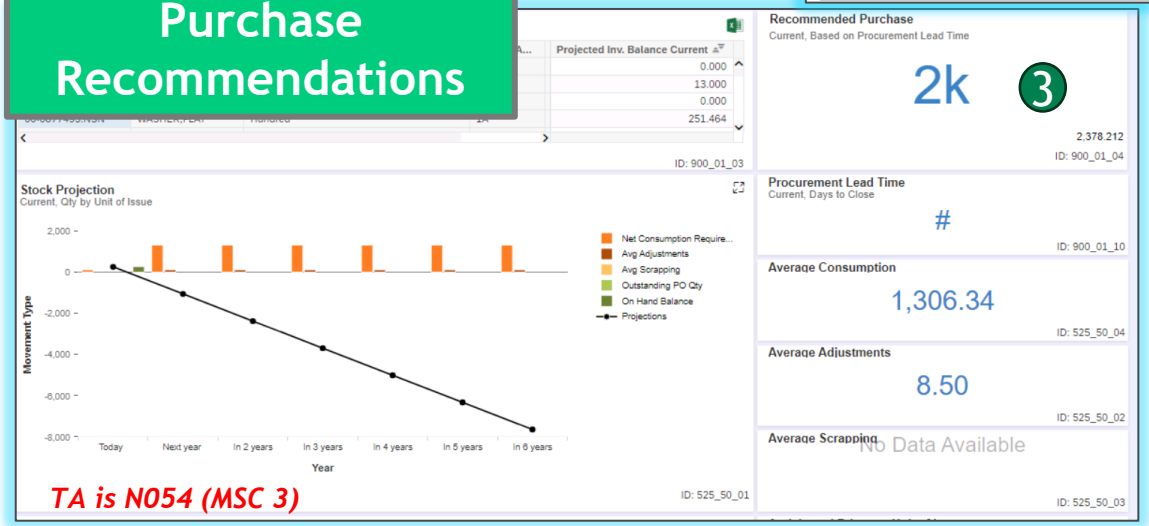
1

Fulfillment Options



2

Purchase Recommendations



3

Washer Case Study

1. There are 3 outstanding WOs from Nov 2023 at the AEFC pointed at Mtl Depot for grounded LAV 6.0 that requires Qty 9 HD.
2. There are 126 HD in Edm & Halifax Depot that could be used to fulfill the WO.
3. Despite the New Buy PReq for 13 HD, DSC Analytics recommends buying 2378 HD.

So WHAT?

- Requirements get fulfilled immediately
- NP is spent more deliberately

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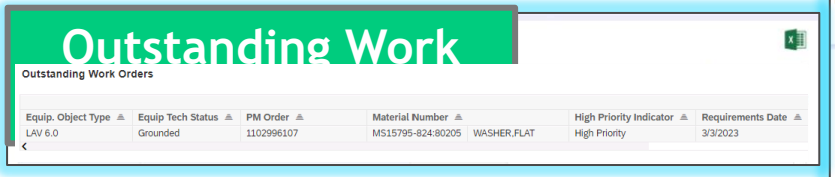
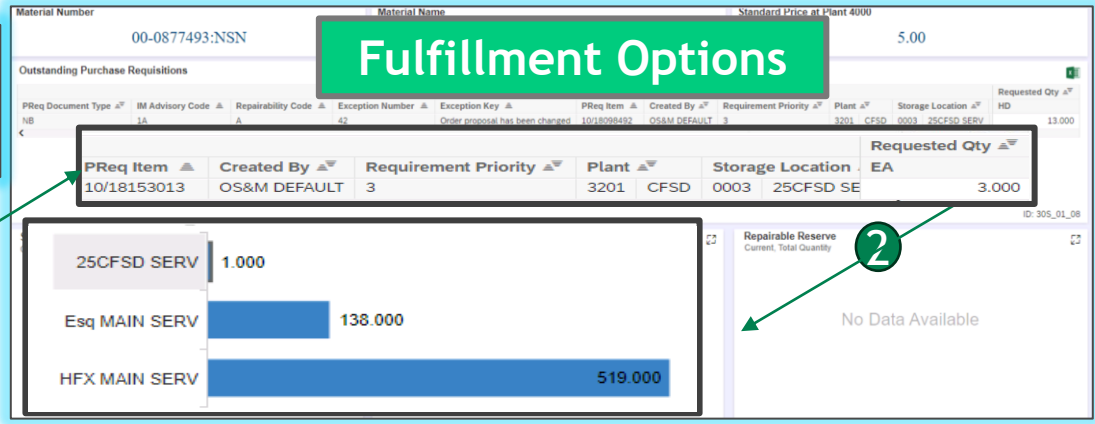
DSC Analytics Material Management Dashboard

Outstanding Work



MS15795-824:80205 | WASHER,FLAT (1)

Fulfillment Options



Purchase Recommendations

There are none! (3)

TA is N246 (MSC 6)

Washer Case Study

1. There is an outstanding WO at the AEFC pointed at Mtl Depot for a grounded LAV 6.0 that requires Qty 4 – **Req date of 3 Mar 23…**
2. There is only 1 at 25 CFSD but a total of 658 across the DSC that could be used to fulfill the WO.
3. Despite the New Buy PReq for 3, DSC Analytics recommends buying None!

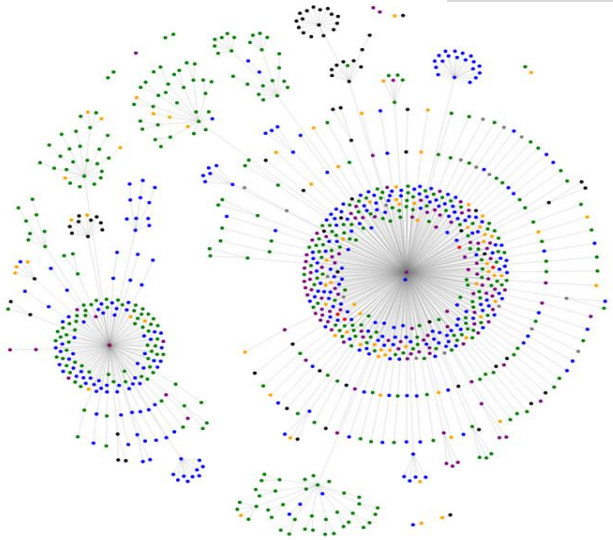
So WHAT?

- Requirements get fulfilled immediately
- NP is spent more deliberately

Advanced analytics

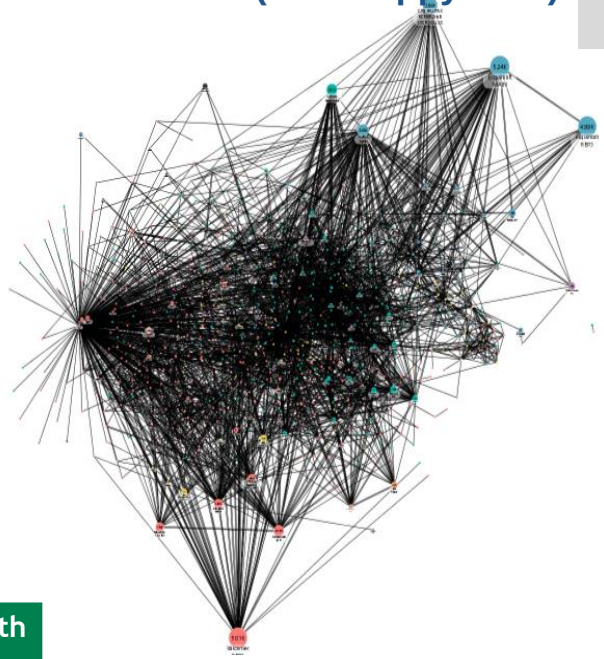
Followed Supporting Relationship (Happy Path)

Automated



Did NOT Follow Supporting Relationship (Non-Happy Path)

Manual Intervention



	Happy Path	Non-Happy Path
Total Volume (LI)	55.98%	44.02%
Total Volume (Qty)	56.05%	43.95%
POF (LI)	61.81%	50.57%
High Priority (LI)	47.36%	52.64%

2020-21 STOs

Excludes:

- All Ships
- All _S MRP Areas
- All clothing accounts
- Plants 5000 to 5999
- No RMA/CRPA
- Publication Depot (in/out)
- Reverse logistics

DRMIS was configured to allow materiel demands to go up the supply chain based on the supporting relationship, which we will call the Happy Path. In 20/21, **44% of all Stock Transport Orders (STO) did not follow the Happy Path.** When the Happy Path was followed, STOs had a 61% POF, while STOs that followed the non-happy path had a 50% POF.

Module 4: Question & Answer

Join at slido.com
Event code: DSC

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Key takeaways

Analytics Data

- Functional data sets such as DSC should be managed centrally
- Limit manual data manipulation

Excel

Dashboards

- Consider what's under the hood…
- Leverage enterprise capabilities first
- Tailor build dashboards for your line of business, with centralized data
- Highly paid contractor are not required…

Analysts

- Look beyond the picture
- Dedicate resources to analysis work
- These analysts need to act on the information, not producing competing dashboards…

End of Module 4

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Break
15 Mins

Module 5

Reporting

Bronwynn Guymer

Section Head

DMPP 7

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The Cycle

Module 5:
Audits,
MAPs
Financial
Statements

Module 5 - Reporting

Main Topics:

1. What We Report
2. Why We Report
3. How We Report

Module 5 - Reporting

Learning objectives

At the end of this module, you will be able to:

- Understand why the management of materiel and associated data is critical to reporting back to the Government of Canada

Activity 5-1

Join at slido.com
Event code: DSC

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Topic #1: What We Report

All Departments are mandated to report back to the Government of Canada

What we did with the resources we were given:

Financial

Materiel

Human Resources

Infrastructure

How well we achieved the mandate that was given to us:

- Operations
- Readiness
- Training
- Budgeting
- Procurement
- Environmental Protection

Topic #2: Why We Report

In some instances, we self-report and in others we are audited by internal auditors (Review Services) and external auditors (Office of the Auditor General).

We report to Demonstrate:

Sound Stewardship & Value for Money	• We are responsible with the resources we have been granted by the public

Program Delivery	• Show that our programs/mandate are achievable
	  • Strong at Home
	  • Secure in North America
	  • Engaged in the World

Priorities of Canada	• Show that we are able to achieve the Priorities
	  • Green Procurement/Indigenous Procurement
	  • Fuel Management
	  • Toxic Substance Management

Topic #3: How We Report

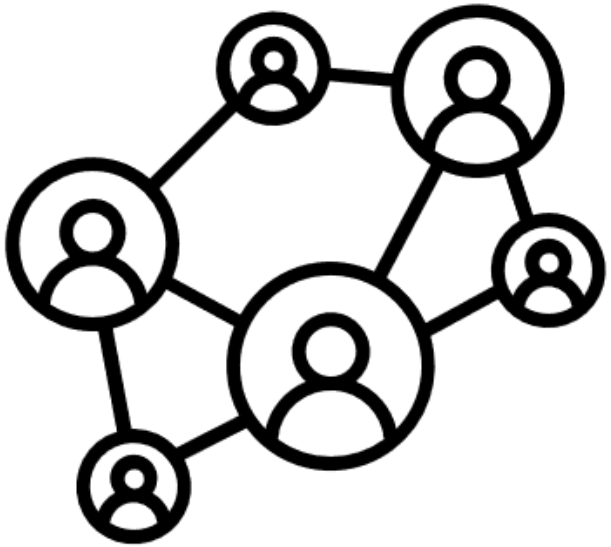
We use Instruments such as:

- Departmental Plan
- Departmental Results Report
- Management Action Plans
- Financial Accounts/Public Accounts Statements
- Office of Auditor General Reports/Responses
- Materiel Accountability Action Plans

Integration

- The data that we generate through all of the processes that are executed in the Business Execution Phase that are articulated and designed in the Policy phase is what is pulled in the Validation and Reporting Phase.

- The data is cross-functional and multi-purpose

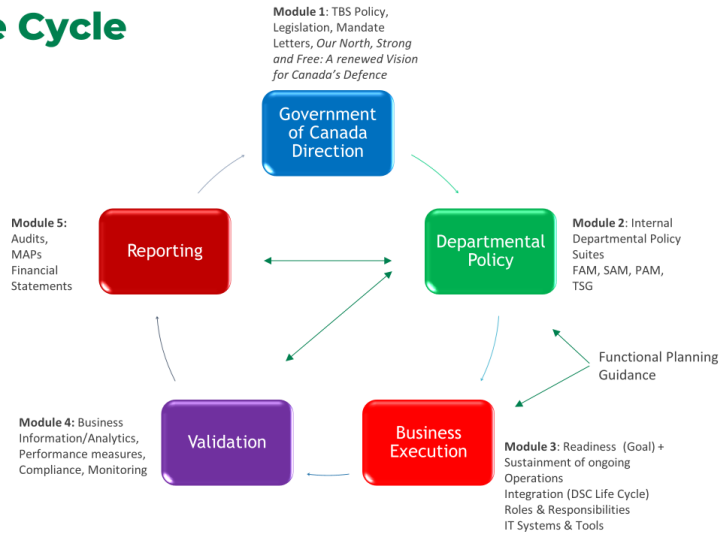


Moule 5: Question & Answer

Join at slido.com
Event code: DSC

Key Takeaways

The Cycle



- We are tasked by Government through multiple instruments
- That information is converted into internal policies that may include process and procedures
- Business is executed
- Internal Analytics and Compliance are done
- Resulting in reporting back to Government that we did what we were tasked with the resources we were given.

Additional Resources

- Under VCDS – Chief of Programme
- Under ADM(MAT)

Services and Information

Organization & Establishment

- Organization
- MOOS
- CFOOs
- Organization Chart
- Establishment
- Regular Force Establishment Planning
- Reserve Force Establishment Planning

Defence Services Programme

- Defence Services Programme
- L1 Business Planning
- Performance Management
- Integrated Risk Management
- Government Reporting

Departmental Results Framework and Program Inventory

- Departmental Results Framework and Program Inventory
- Program Alignment Architecture (archived)

Reports & Publications

- Reports & Publications

Capital Project Coordination

- PAD Approval Directive
- Projects Contacts
- Project Approval Course

Training & Courses

- DRMC - Defence Resources Management Course
- Introduction to Risk Management
- PAC - Project Approval Course
- PMP Trg - Position Management Process Training

Materiel accountability

Director Supply Chain Operations (DSCO) 2-3 is the DSCO Centre for materiel accountability. It provides materiel management guidance, training, and oversight on subjects pertaining to stocktaking, inventory planning, and supply chain business intelligence. In addition, it helps L1s in the preparation and interpretation of formal documentation included in their bi-annual Materiel Accountability Action Plan (MAAP) and their materiel attestation submissions.

As a client-focused, service-oriented program, DSCO 2-3 is able to help an organization reach their materiel management and reporting goals.

An organization's participation in the program is an important element of DND's materiel management success. When DND is accountable for the management of materiel, operational effectiveness is improved and the public is well served.

For further information, questions or help with your materiel management and reporting goals, please contact the DSCO 2-3 mailbox.

References

- 2022-23 MAAP Template (DOCX, 45 KB)
- 2022-23 Letter of Materiel Attestation (DOCX, 25 KB)
- Sample Report Card (XLSX, 20 KB)

- ▶ Materiel Accountability Action Plan
- ▶ Materiel Attestation
- ▶ MAAP report card

End of Module 5

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Feedback Form

Your feedback is much appreciated and helps to improve future professionalization events

Link to Feedback Form

Sign in using your Office 365 ECN account login

Attestation Form

Please complete the form to have your Training record updated in HRMS/PeopleSoft

Link to Attestation Form

Sign in using your Office 365 ECN account login

Closing Remarks
Master of Ceremonies

Denis Forest

Lead

Materiel Management Practitioner Professionalization Project (MMP3)

Thank You

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