



Understanding IT Expenditures through Business Architecture (GC Business Capability Model) – *DFO Example*

To: GC Enterprise Architecture Community of Practice

For: Information

Date: January 9, 2020

Presented By: Lily Au (A/Manager, EA Team)



Purpose of Presentation

- Encourage applying the GC Business Capability Model
 - Task mapping GC BCM with project profile in your Department's Digital Operation Strategic Plan (DOSP) / IT Plan in TBS Clarity Tool

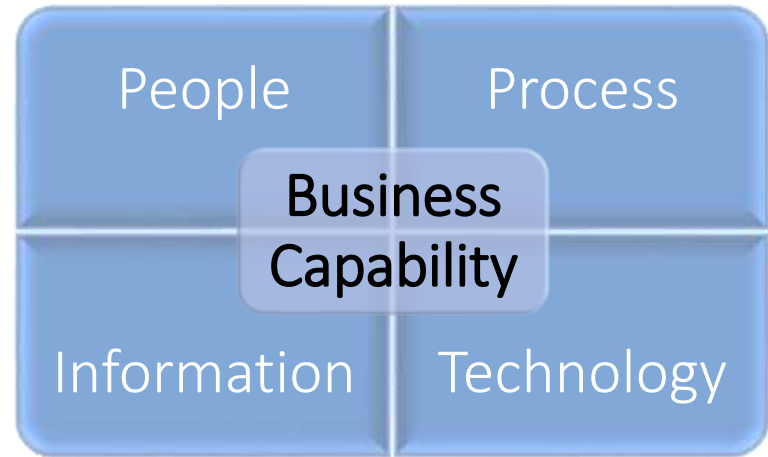
Business Architecture Highlight

BA Translates the organization's business mission, vision, strategies, goals, and issues into objects and information that are used to derive **current and target state** business capabilities/scenarios.



Business Capability Defined

- A business capability defines the organization's capacity to successfully perform a unique business activity
 - Expressed concisely in *general* and *high-level* terms
 - Composed of *people, process, information & technology*
 - Create & support *services*



“What” business does, not **“How”**

Business Architecture (BCM) Developments

- TBS has been promoting the development and use of the GC Business Capability Model (BCM) since 2016
- GC BCM Inter-departmental Working Group managed GC BCM
- TBS requires departments to reference GC BCM for planning
 1. Mapping of IT, Digital proposal to GC BCM as part of requirements for GC Enterprise Architecture Review Board (GC EARB)
 2. Linking projects and activities to GC BCM in the departmental Digital Operations Strategic Plan / IT Plan
(Project/Activity profile in TBS Clarity tool --See screen shot Slide #6)
 - ✓ DFO completed this and is sharing the experiences

Where are the GC Business Capability for DFO's projects in TBS Clarity tool?

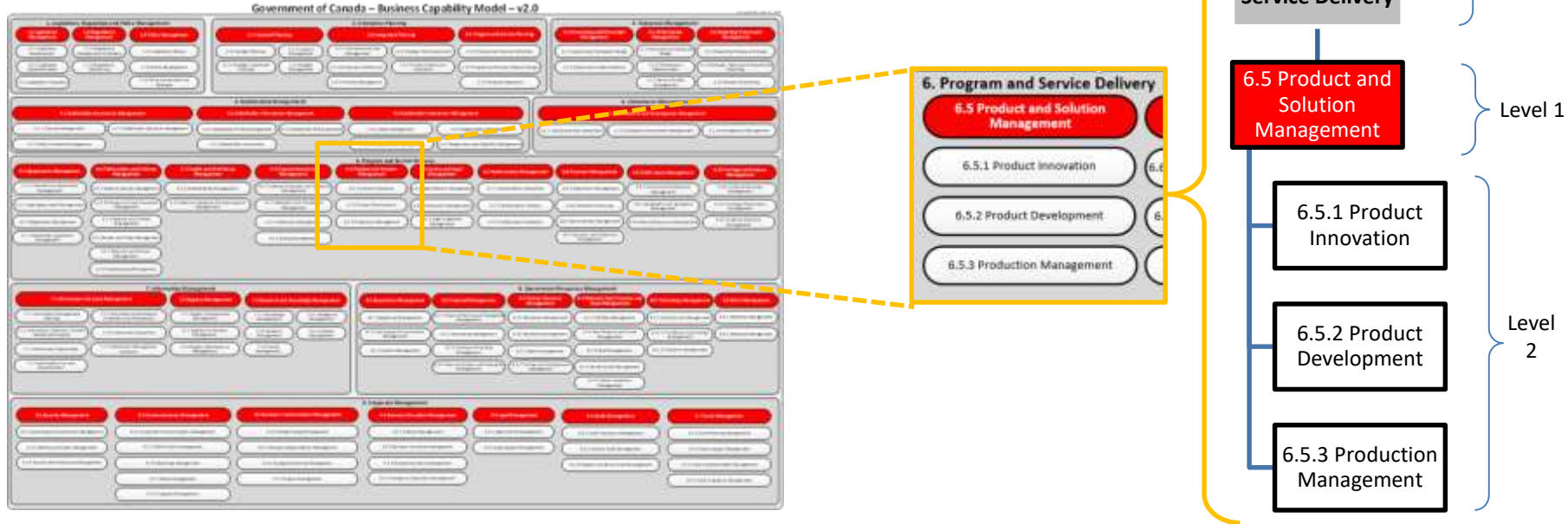
1. Open TBS Clarity tool IT Plan for your dept (if you have access)
2. Select a project
3. Go to **References Section** at the end for each project profile to find GC BCM Levels x 3 –



A screenshot of the TBS Clarity tool interface. The interface is divided into several sections: 'Linked Applications' with a list of systems like 'Fisheries Certificate System' and 'National Electronic Access Solution'; 'Business Capabilities Level 0' with 'Program and Service Delivery'; 'Business Capabilities Level 1' with 'Licensing and Accreditation M'; 'Business Capabilities Level 2' with 'Licensing and Accreditation G'; 'IM/IT Application Capabilities' with a list including '4. Business Management', '5. Case Management', '8. Enterprise Information Management', and '3. Stakeholder Management'; and 'IM/IT Application Sub-Capabilities' with a list including '8.8. Ad Hoc Queries', '8.6. Analytics Management (Data-Mining)', '3.4. Client Self-Service Management', '5.3. Case Tracking Management', and '3.7. Contact Management'. Each section has a close button (X) and a help icon (H).

GC Business Capability Model

- Model represents a hierarchical decomposition of the business
 - Can be examined at different levels of detail



WHY

Business Capability Model

BCM Helps to Understand -

What does DFO and Coast Guard spend on IM/IT investment ?

1. Overall spending forecast

DFO IM/IT Investment (3 Year)

*Based on Digital Operations Strategic Plan/IT Plan (TBS Clarity tool)

GC Business Capability	3-Year \$ Estimate
Natural Resources Management	\$23,323,620
Infrastructure Management	\$14,146,201
Authorization Management	\$14,092,000
Geographic and Geospatial Management	\$8,362,247
Technology Management	\$2,065,172
Others – Next Slide	
	Total: \$165,886,425

GC Business Capability	# Projects and Activities
Natural Resources Management	38
Infrastructure Management	21
Geographic and Geospatial Management	11
Technology Management	9
Authorization Management	7
Others – Next Slide	
	Total: 165

*Application Capability also in the IT Plan (TBS Clarity) References Section

*Linked Applications also in the IT Plan (TBS Clarity) References Section

DFO IM/IT Investment (3 Year)

GC Business Capability	# of Projects/ activities	3-year cost estimate
In the process of assigning Capability for NEW Projects Year 2020-2021	26	\$54,220,000
Authorization Management	7	\$14,092,000
Change Implementation Management	1	\$0
Communications Management	3	\$748,600
Corporate Communications Management	1	\$0
Defense and Combat Management	1	\$0
Emergency Operations Management	1	\$150,000
Engagement Management	1	\$0
Enterprise Architecture	1	\$0
Environmental Advocacy Management	1	\$0
Facilities Management	3	\$722,600
Financial Management	1	\$6,000
Fleet Management	5	\$9,076,127
Geographic and Geospatial Management	11	\$8,362,247
Information Life Cycle Management	2	\$221,000
Information Management Planning	1	\$10,360,000
Infrastructure Management	21	\$14,146,201
IT Architecture and Design Management	2	\$2,815,277
Materiel, Real Property and Asset Management	2	\$3,794,000
National Security Management	6	\$15,382,000
Natural Resources Management	38	\$23,323,620
Payment Processing	1	\$0
Policing and Crime Prevention Management	1	\$0
Public Asset Management	1	\$0
Public Safety and Defense Management	1	\$667,000
Real Property and Asset Management	1	\$0
Registry Verification Management	2	\$130,000
Regulations Management	1	\$346,000
Regulations Monitoring	3	\$1,152,425
Response and Rescue Management	3	\$2,642,000
Security Management	2	\$115,000
Security Monitoring and Management	1	\$0
Strategic, Tactical and Operational Reporting	1	\$410,000
Technology Management	9	\$2,065,172
Workforce Management	2	\$939,156
Workplace Management	1	\$0
Grand Total	165	\$165,886,425

*Application Capability also in the IT Plan (TBS Clarity) References Section
*Linked Applications also in the IT Plan (TBS Clarity) References Section

*Based on Digital Operations Strategic Plan/IT Plan (TBS Clarity tool)

DFO IM/IT Investment (3 Year)

*Based on Digital Operations Strategic Plan/IT Plan (TBS Clarity tool)

DFO DOSP Projects and Activities in TBS Clarity 2019-20

Developed by: Lily Au Enterprise Architect, Oct 20

Ecosystem Fisheries & Management (EFM)

- Aquaculture Integrated Information System (AQUIIS) (Regulatory) (>PHAS)
- Atlantic Region Recreational Groundfish Fishery Licence (aka MRFLEC)
- Canadian Shellfish Sanitation Program Mapping Tool (CSSP) (Incident Management, Safety)
- C&P Mobile Office
- Digital Forensics (DIF)
- EFM SI-Planning & Oversight
- EFM SI-Commercial Fishing
- ELOGS National Electronic Gathering of Catch & Effort Info
- Enhancements & Modifications Fisheries Licensing Management System
- Fish Harvesters Resource Centre (FHRC) Landings Direct Data Entry (>NL Catch & Effort)
- Fisheries Regulation Information System (FRIS)
- Investigation & Disclosure
- Kept & Released Survey Estimation Tool (KREST)
- National Fisheries Intelligence System (NFIS)
- National Online Licensing System – Call and E-mail Management Solution for the Client Support Model
- National Online Licensing System – Critical Enhancements
- National Recreational Licensing System Upgrade
- National Species at Risk Web Mapping
- Recreational Fisheries Information Transformation (RFIT)
- OPP-National High Resolution Archived Vessel Tracking Data Mapping System
- OPP-National Implementation of Regional Response Planning (EFM)
- OPP-Program Activity Tracking for Habitat Enhancements (PATH)

AEFHM (Aquatic Ecosystem Fisheries & Harbour M)

- Resource Management Reporting Tool
- Business Number FCS Pilot
- C&P NPSnet Connection Request
- ENPRO-SEP (Salmon Enhancement Program)
- FMHIS (Fisheries M Harvest Info System)
- Ocean Atlas

Ecosystem and Ocean Science (EOS)

- Atlantic Catch Data-ASOC Certification & ISDC
- CHS Physical Servers Migration to SSC Arch (PSM)
- Compliance and Enforcement System (CES)
- Federal Geospatial Platform (FGP)
- Freshwater Institute – Laboratory Information Management System
- Laboratory Information Management System (LIMS) – Database Upgrade
- Mark Recovery Program Upgrade
- Molecular Genetics Microarray Database (MGMD)
- Multidisciplinary Ocean Data Integration (MODIP)
- Ocean Gliders
- Ocean Tracking Network
- OGSL Web Services
- Port Sampling Fisheries File System Utility Replacement (PSFFS)
- Science Field and At-Sea Data Migration Project
- Science Sector Storage Requirements (SSSR)
- Science Sector Systems Renewal Project (SSR)
- Sea Lamprey IM System (SULMS)
- Water Level Systems Renewal (WLSR)
- OPP-CHSDir Enhancement
- OPP-Coastal Environmental Baseline Program
- OPP-Drift Prediction Modeling
- OPP-Hydro-graphic Operational Infrastructure Support (HOIS)
- OPP-IT Support for Multi-beam Systems
- OPP-Large Mammal Collision Avoidance System
- OPP-Law of the Sea Data Architecture
- OPP-Marine Spatial Data Infrastructure (MSDI)
- OPP-Metadata APPLICATION Development
- OPP-National Planning Tool Enhancement
- OPP-Near Shore Modeling
- OPP-Northern Marine Transportation Corridor (GIS Analytical Tool Enhancements)
- OPP-Regional Needs-Regional Response Planning (RPR), Marine Environmental Quality Measures (MEQ) and Oceans Strategy Development
- OPP-Science in Support of Marine Environment Quality (MEQ) and Non-Regulatory Measures – Quebec, Pacific, Maritimes
- OPP-Traverse Application Required Upgrade (TARU)
- OPP-Water Level Network Instrumentation
- OPP-WCTSS -OPP Dynamic Water Levels and Current E-Navigation
- OPP-CHS National Bathymetry Delivery System
- OPP-HRCS-Oceans Protection Plan – On-boarding Laboratory Information Management System Enhancements (LIMS) National Physical Samples Database

OPP

- OPP-Engagement Tracking Tool

HRCS

- Avecto DefendPoint (ADP)
- Business Number Broad Adoption Across DFO
- Change Management Module of CMDB
- Cognos BI Environment v10-11 Migration and Consolidation
- Cost and Profitability Management Solution for RP55 (CPM)
- DFO Architecture Repository & Modeling Software (ARMS)
- Directive on Open Gov
- Email Transformation Initiative (ETI)
- Enterprise Mobile Management (EMDM)
- GC DOCS
- Geographic Info System Consolidation (GISC)
- High Performance Computing Lifecycle Management (HPCLM)
- HR – Account Management Portal Enhancements
- Integrate IT Security Controls in Mission Critical, Public-Facing Application (Formerly SAA)
- TADAP
- IT Services Group
 - Application/Database Development & Maintenance
 - Data & Voice Services
 - Distributed Computing
 - IT Program Management
 - IT Security Services
 - Production & Operations Computing
- ITSCM – Mission Critical Review
- Network Services Upgrades (NSU-CITRIX)
- One Government of Canada Website Initiative (GOC-WEB) Phase 1
- Oracle Upgrade to 12C for AIX Platform
- Organization & Classification Monitoring & Tracking Database
- Real Property IM System (RFIMS) Enhancements
- Science Enterprise Centres
- Single Window Initiative (SWI)
- Windows 2008 Server Upgrade
- Windows 10 / Office 2016
- Workload Migration (WLM)
- HR-Pay Support Team Case Tracker
- DFO National WiFi Implementation Workplace Enhancements

INT

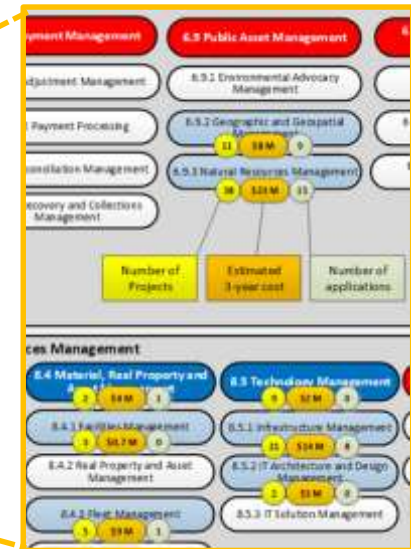
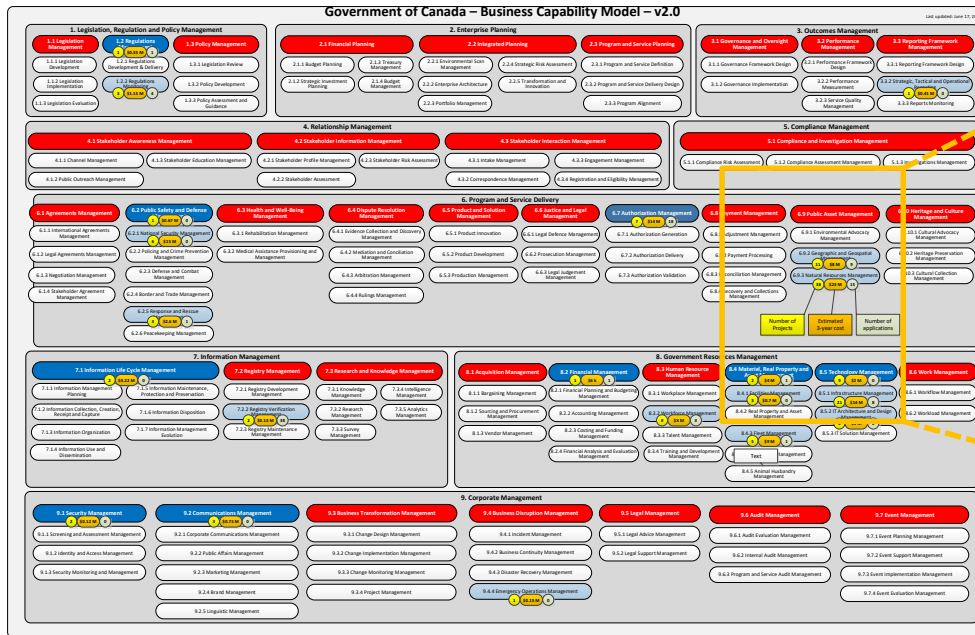
- Migration to Communications Automated Tracking System (CATS) from MS Access to SQL Server
- Communications-Web Request Management Tool

Strategic Policy

- Policy on Results – Results, Risks + Management System

SSC Service Category

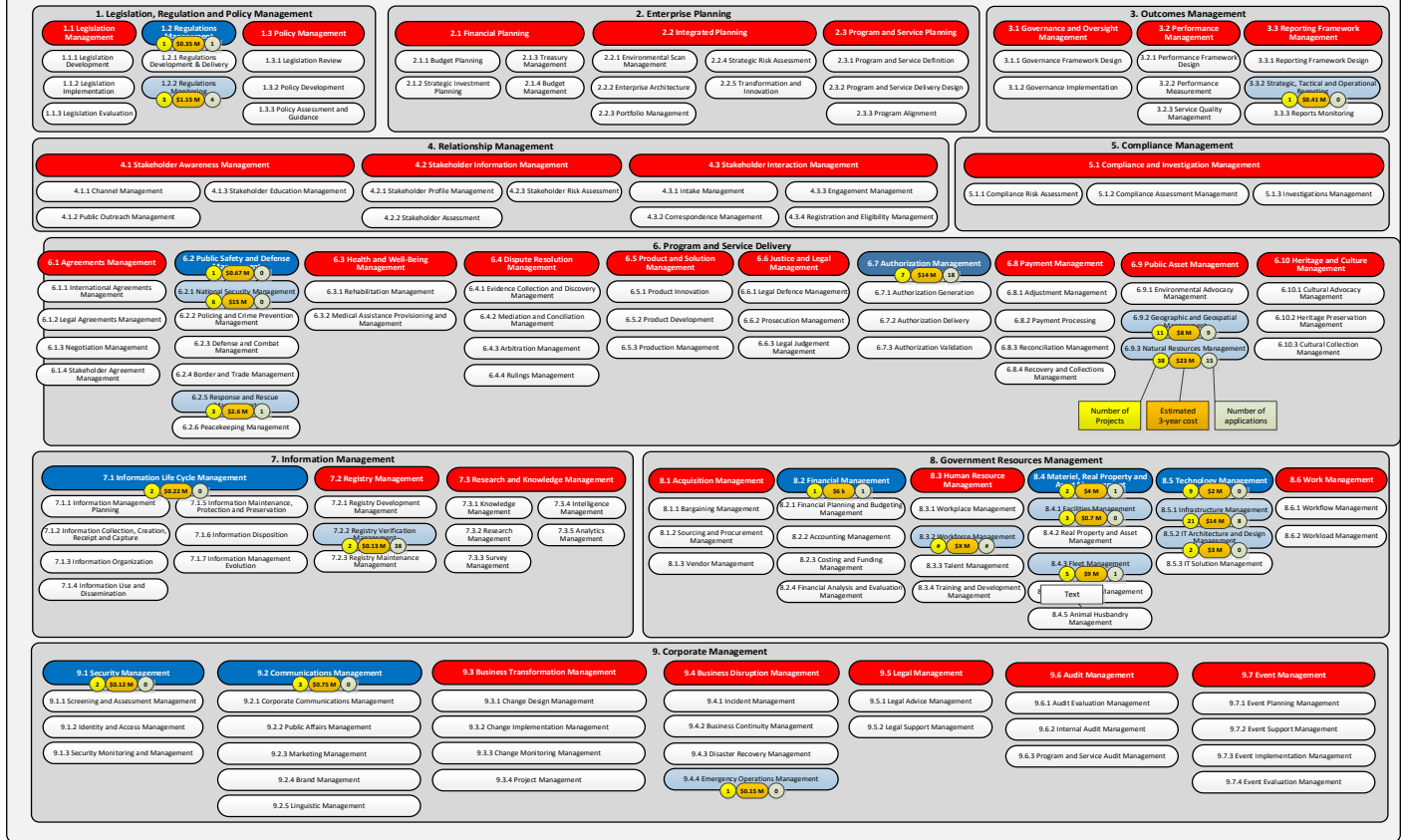
GC BCM mapping of projects, costs, applications



Government of Canada – Business Capability Model – v2.0

Last updated: June 17, 2019

GC BCM
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WHY

Business Capability Model

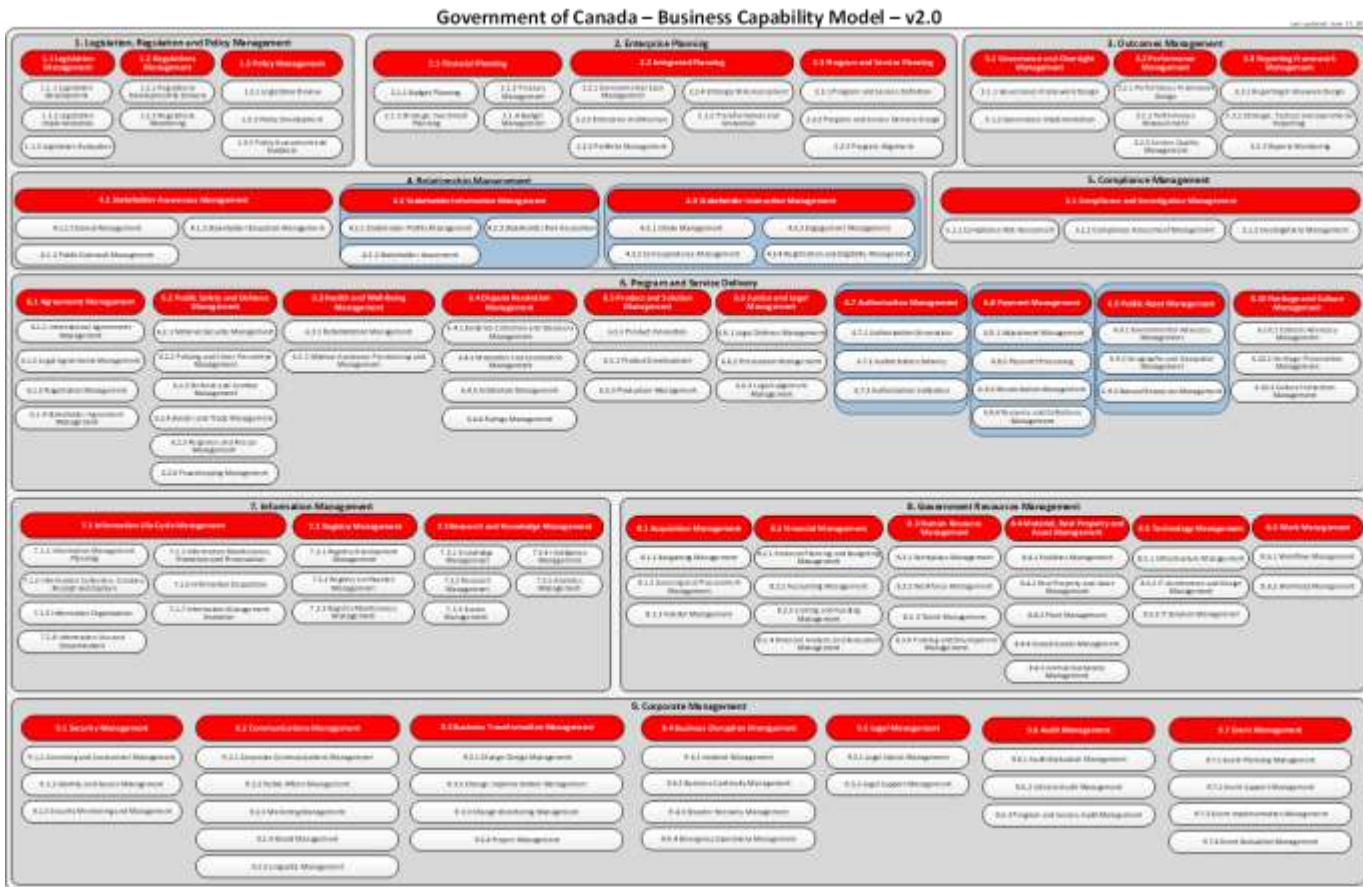
BCM Helps to Understand -

What does DFO and Coast Guard spend on IM/IT investment ?

2.Transformation Initiative, e.g. EFM SI

DFO EFM SI Initiative

Alignment to GC Business Capability Model v2.0



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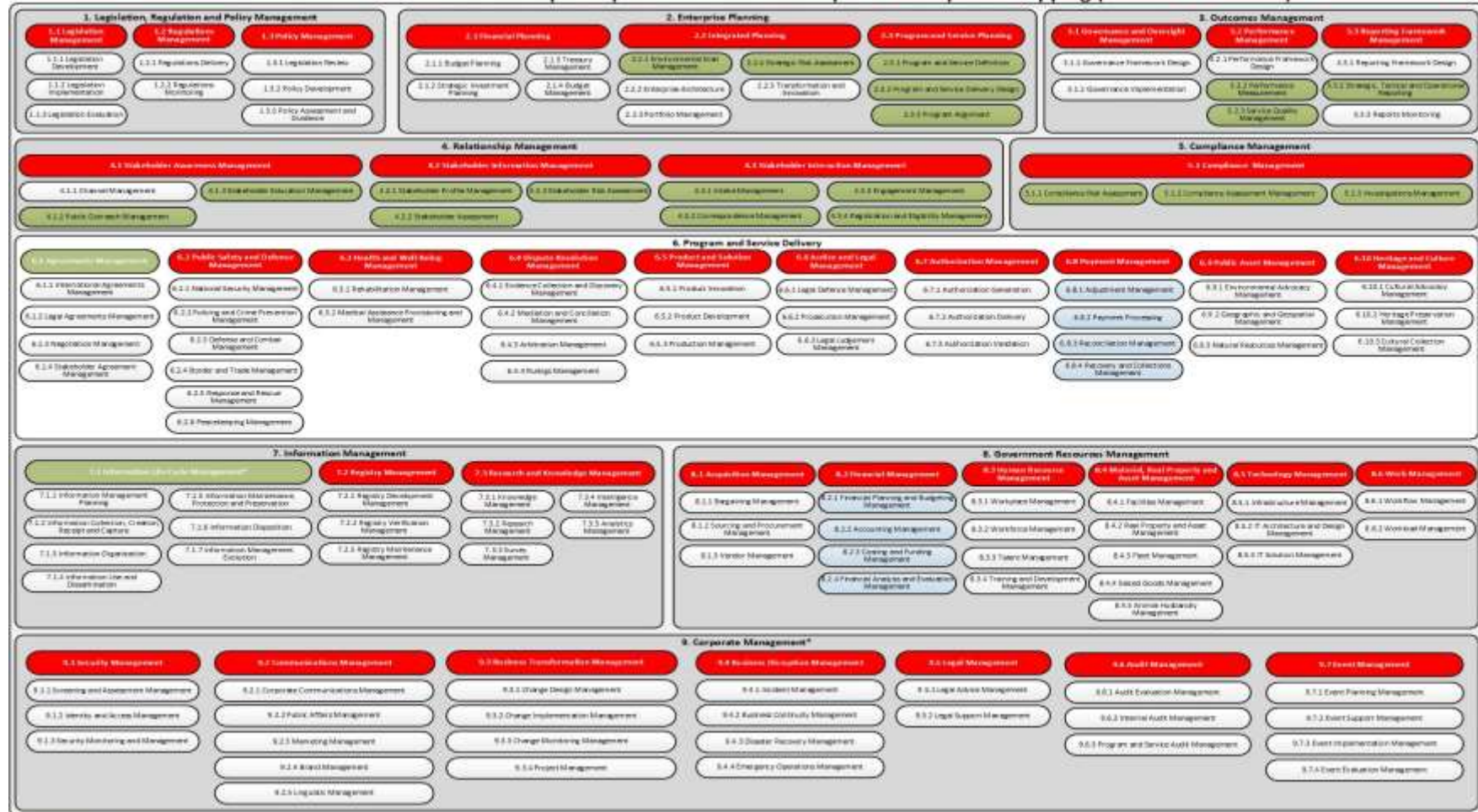
3.Common Systems

e.g. DFO is initiating departmental common Gs&Cs system based on:

- existing project Atlantic Fisheries Fund for processing Gs&Cs cases;

- and TBS GC SAP coming modules.

Government of Canada – Business Capability Model – v2.0 - G&C Operational System Mapping (Draft for discussion)



Business Capability Model

- Who
- How

Who are involved in BCM and IT Planning?

How and what kind of efforts are required to map BCM in IT Plan?

Efforts Required

50%

Analysis

Information, Intelligence

- Business Architecture (Business Capability Model, etc.)
- Departmental Business Info
- Plans and Strategies
- Project Info
- Financial Data



50%

Consultation, Collaboration

Players

- Management from Business & IT
- Project Teams
- Business Clients
- Project Management Office
- IT Planning Team
- Architect Teams



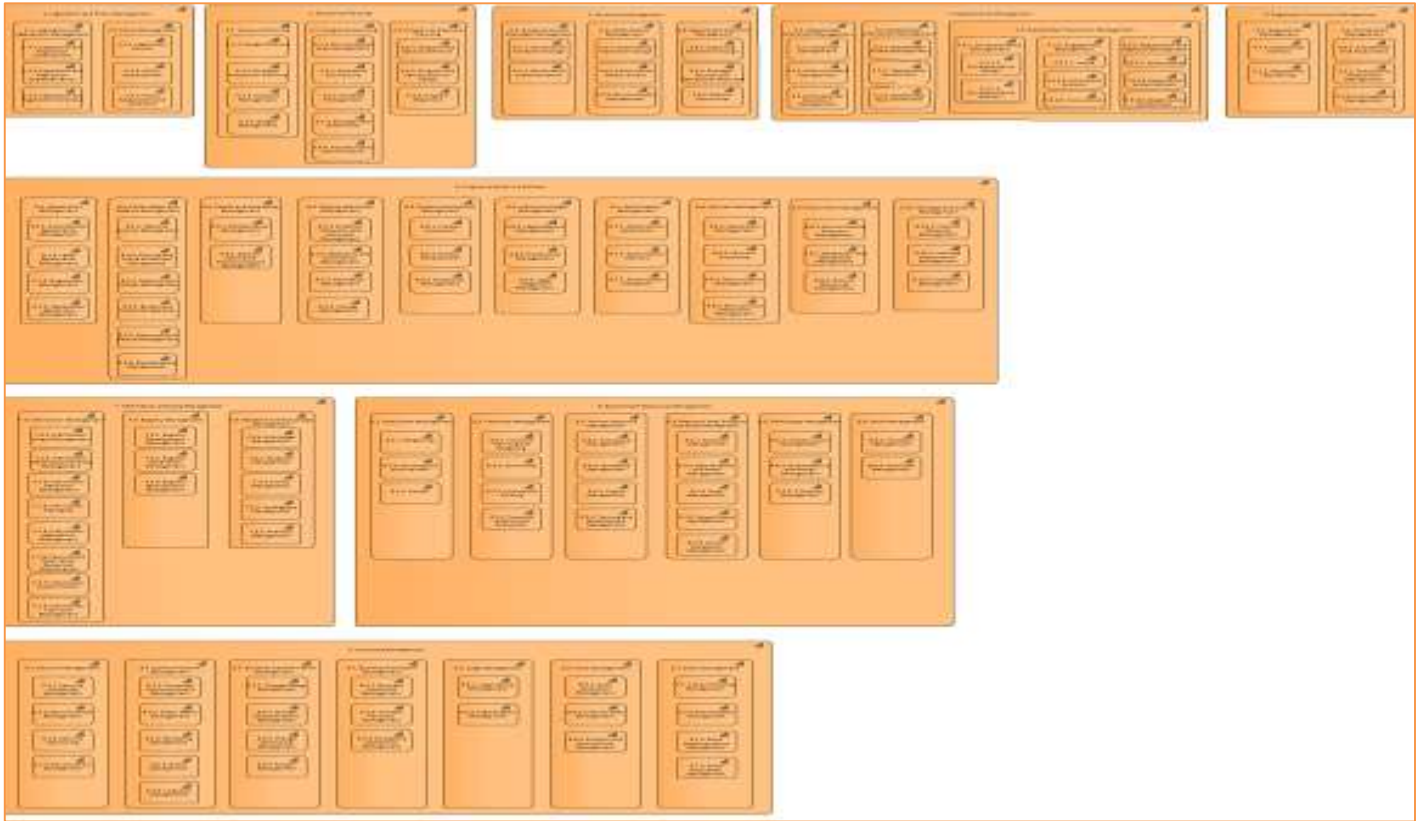
IT Plan Information

- Information of the IT Plan in TBS Clarity tool is obtained from the business intake process including list of projects approved by the IT and Business Senior Management Committee
- Information is entered by IT Planning Team through clients, Client Portfolio Team and Project Management Team consultations
- Information is updated by IT Planning Team real time through out the year
- Caveats:
 - Expenditure values are sums of the 3-year cost estimates for each project/activity in the IT Plan
 - Mappings of projects and activities to GC BCM needs to be validated through consultations with client project leads thoroughly; efforts are required to further consolidate and mature the IT planning process overall
 - Lowest level business capability mapping was used for each project/activity (Level 1 or Level 2)

Next Steps

- Validate the GC BCM and application mappings with project leads for DOSP (IT Plan) 2020-21, 165 projects
 - Validate GC BCM identifications, project purpose and outcome
 - Validate financial numbers
- Develop use case
 - Common Grants and Contributions Programs and Systems
 - EFM SI Transformation
 - Registry Act Transformation
 - Develop roadmap for new projects
 - Develop richer, fuller meaningful stories of the DFO and Coast Guard business through the business capability lens

Annex A – GC BCM (ArchiMate) in SPARX EA Tool



Annex B – DFO BCM

(For Highlighting, Expanding DFO Capabilities based on GC BCM)

