Codification as a Tool for the Management of the Systems Life Cycle and the Defense Industrial Base

“Connecting Global Logistics Through Technology”
Summary

- The Strategic Framework
- Codification as a Management Tool for Improving Logistics
- The Brazilian Defense Codification System Structure
- Producing Specific Knowledge by the Codification Activity
Defense National Strategy Guidelines

- Obtain independence in defense products, through the development of a National Defense Industrial Base.

- Increase the availability of defense products at the lowest possible cost, through the enhancement of Logistics and Mobilization.

- Increase interoperability among the Armed Forces
Legal Regulatory Framework for the Defense Industrial Base

- Defines the Concepts of Strategics Companies and Products
- Sets up Conditions to classify Strategics Companies and Products
- Sets up Fiscal and Economics Incentives
- Codification Obligation, following the rules of the NCS, on the products on Defense Contracts
- Etc...
1) Codification, as a tool for detailing Product and Logistics Breakdown Structures
2) Codification, as a reference language of a defense system during its Life Cycle

Astros 2020 Guided Missile System
AVIBRAS, Naval and Air Division

Corvette "BARROSO" Class
Brazilian Navy Shipyard

KC 390 Military Transport Aircraft
EMBRAER Aeronautical Industry

Contractual Codification Clause (CCC)

PROCUREMENT
CONCEPT
DEVELOPMENT
PRODUCTION

ACTIVITY
OPERATION
SUPPORT

DISPOSAL
RETIREMENT
Spiral of Risks
Product Logistics Support

Supply Chain Management

Product Configuration Management

Maintenance Management

CODIFICATION SYSTEM

DEFENSE INDUSTRIAL BASE
(Industries of Defense Interest)
DEFENSE CODIFICATION SYSTEM (SISCASCADE)

- GOVERNANCE
- ORGANIZATION
- INFORMATION
- TECHNOLOGY
CODIFICATION CLOUD

AURA
MC CATALOGUE
(SISCAT-BR)
DATABASES FROM OTHERS GOVERNMENT AND CIVILIAN INFORMATION SYSTEMS OF INTEREST

LOGISTICS BREAKDOWN STRUCTURE (Customization on MCC, using Type Resource, as NCS Segment “X”)

- Department of Treasury
- Federal Customs System
- Strategic Industries
- Industries Confederations

CODEX

KNOWLEDGE MINING DATABASE OF THE DEFENSE INDUSTRIAL BASE

NCS TRANSACTIONS DATA SEGMENTS (“A”, “B”, “C”, “V” and “8”)

SISCADE DATABASE

NCS
SOME PRACTICAL EXAMPLES

CODEX

KNOWLEDGE MINING
DATABASE OF THE
DEFENSE INDUSTRIAL
BASE
GUIDE OF PRODUCTS OF DEFENSE INTEREST
YOUR PRODUCT FOR THE WORLD
::: 2017 :::
Using codification view for mapping productive chain in order to estimate economic impact over Employment and Aggregated Value Macroeconomics Variables on Brazilian Economy, during the Federal Public Budgeting Process.

Investment per ship: US$450 Mi
1) The input-output analysis is a powerful and flexible methodology suitable to estimate macroeconomics impacts over an economy, as a whole or part of it, when investments decisions are carried on a certain economic activity sector. For example, which would be the multiplier effect, in terms of income, consumption, employment, tax and exports, over a defense production chain considering government defense materiel orders in such kind of productive structure?

2) The analytical process is developed with bases on the National Input-Output Matrix, that relates financial capital inflows and outflows amid the different economic activity sectors. The matrix is regularly issued and updated by Statistics National Bureau.
Thus, based on the Productive Chain of the Corvette Barroso, defined in terms of Codification and applying the Brazilian Economy Input-Output Matrix, we are able to set up an especific production matrix for the Corvette, in order to estimate the multiplier effect over the whole Brazilian Economy.

Brazilian Input-Output Matrix, calculated by National Statistics Bureau, shows relationships among 140 economic sectors. The corvette especific matrix covers 36 sectors.
<table>
<thead>
<tr>
<th></th>
<th>CV Barroso</th>
<th>CV Tamandaré</th>
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<tbody>
<tr>
<td><strong>Initial Investment</strong></td>
<td>R$ 1 Bi</td>
<td>R$ 1,5 Bi</td>
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<tr>
<td><strong>Local Content Index Goal</strong></td>
<td>43%</td>
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<tr>
<td><strong>a) GDP</strong></td>
<td></td>
<td></td>
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<tr>
<td>Direct</td>
<td>R$ 186 Mi</td>
<td>R$ 280 Mi</td>
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<tr>
<td>Indirect</td>
<td>R$ 193 Mi</td>
<td>R$ 290 Mi</td>
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<tr>
<td>Total</td>
<td>R$ 380 Mi</td>
<td>R$ 570 Mi</td>
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<tr>
<td><strong>b) Economy Aggregated Value</strong></td>
<td></td>
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<tr>
<td>Direct</td>
<td>R$ 68 Mi</td>
<td>R$ 103 Mi</td>
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<tr>
<td>Indirect</td>
<td>R$ 78 Mi</td>
<td>R$ 117 Mi</td>
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<tr>
<td>Total</td>
<td>R$ 146 Mi</td>
<td>R$ 220 Mi</td>
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<td><strong>c) New Job Posts</strong></td>
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<tr>
<td>Direct</td>
<td>2.607</td>
<td>3.911</td>
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<tr>
<td>Indirect</td>
<td>2.619</td>
<td>3.929</td>
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<tr>
<td>Total</td>
<td>5.226</td>
<td>7.840</td>
</tr>
</tbody>
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Currency: Brazilian Reais (R$)
Thank You For The Attention!