
Strategic Cost Management: Take it from the Top

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While the Canadian Federal Government has continued to invest in Modern Comptroller-ship over the last number of years, there is a renewed emphasis and focus on these key principles with the swearing in of the new Paul Martin led Liberal Government. As part of the Prime Minister's commitment to enhance transparency and accountability, a number of initiatives have been undertaken to strengthen oversight and sound management of public resources. One aspect of such increased transparency and accountability is costing, and the linking of cost performance information to other performance metrics to support better decision-making and reporting.

Certainly a number of these initiatives will be aimed at responding to the observations and recommendations made by the Office of the Auditor General during 2003. In her April 2003 report, the Auditor General notes:

"The government is implementing its Comptrollership Modernization and Results for Canadians initiatives. To carry out this process, it needs good-quality information on the full cost of departmental programs. However, departments are not making full use of activity or program costing, including the full allocation of corporate overheads. The systems, policies, and practices for capturing and reporting full cost information need to be improved."

The report goes on to say:

"A number of costing methods are available to give managers information on the full cost of their programs, including the cost of corporate overhead supporting the programs. We found that costing methods are not widely used or standardized in departments, although some departments are exploring particular methods—for example, Public Works and Government Services Canada and the Department of Foreign Affairs and International Trade are

considering introducing activity-based costing."

In fact, a number of departments have undertaken initiatives to implement full costing models in an attempt to meet their decision-making and reporting needs. In addition to the departments noted by the Auditor General, others including, Department of National Defence, Environment Canada, Citizenship and Immigration Canada, Canada Customs Revenue Agency, Department of Fisheries and Oceans, etc. have implemented or are currently implementing costing management models using Activity Based Costing (ABC) techniques.

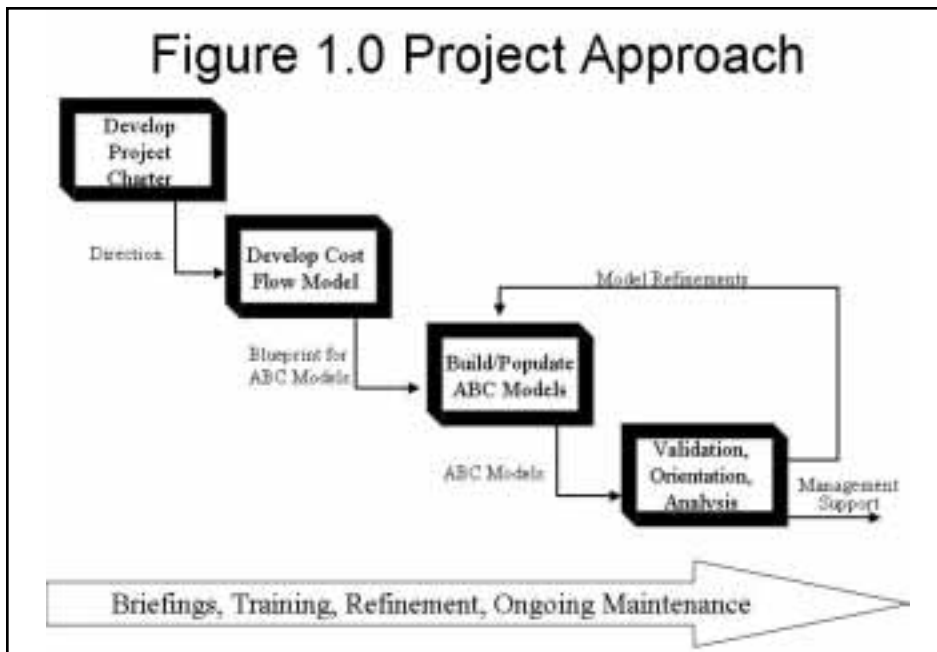
The challenge for these departments, and for those embarking on developing cost management models, is not so much in deciding to utilize ABC techniques, but more in determining *how best* to apply those techniques to their particular environment and needs, and furthermore, *how best* to implement such models.

A recent example of this challenge comes from the Department of National Defence-Maritime Command. In order to meet the Chief of Maritime Staff's need to understand the costs associated with the activities and outputs of the Navy, a revised approach was necessary to reenergize the long time ABC efforts of the organization. The Navy is a large organization comprising approximately 8,800 military members, 4,000 funded reserves and 3,900 civilian full time equivalents. The organization is comprised of three Formations (Maritime Forces Atlantic, Maritime Forces Pacific, and the Naval Reserve), the Canadian Forces Maritime Warfare Centre (CFMWC), and the Headquarters staff. Over the last ten years, a number of ABC models have been developed within separate organizational units within the Formations. These models, while meeting certain needs at the organizational unit level, lacked the ability to be rolled up at higher organizational levels

within the Navy. This shortcoming was due to the fact that not all of the lower level organizational units had ABC models to roll-up, and furthermore, since most of the models were developed in an independent manner the structure and detail of resources, activities, outputs and clients varied greatly.

The situation the Navy faced was similar to that of many organizations, both public and private sector. In order to implement ABC in a manner that was useful to senior managers at the top of the organization, as well as all other levels of the organization, detailed ABC models would need to be developed within all of the organizational units and then rolled up into one corporate model. This approach is very much a *bottom-up* approach, and relies on strong and consistent direction from the top to ensure everything integrates well in the model. Moreover, this approach assumes that the greatest level of detail required is the common denominator in the models – *if we want detail in the ABC model of one part of the organization, we must build it into the ABC models of all of the organization to ensure consistency*. Ultimately, this approach is very nice to have, but needs to be weighed in practical terms.

First, what are you trying to gain with an ABC model: What are we going to be using this ABC model for? What types of deci-



sions will we be looking to support with the ABC model? What questions do we need answered to better understand our business?

Second, is this practical: How much will it cost to implement the ABC model? How long will it take to implement the ABC

model? Does the commitment exist throughout the organization to give the initiative the priority, time, insight and management support necessary to simply complete the model, let alone complete it successfully? What will it cost to maintain the

level of detail in our ABC model?

The *bottom-up* approach had left the Navy with a number of separate models that had become very detailed and cumbersome to maintain, while providing virtually no opportunity for rolling up the individual models at meaningful senior management decision making points. One key asset the *bottom-up* approach had provided, as the Navy explored moving forward, was the significant ABC knowledge and experience that had been gained by the organization and its staff. This would prove extremely valuable in the road ahead.

The Navy had decided to move ahead with ABC with the objective to achieve a Pan Naval ABC Model at the end of the process. Under the leadership of the Maritime Staff Comptroller/Support Services (MS Compt/SS), this process was initiated through the re-establishment of a Maritime Command ABC Working Group, which included representation from each of the Formations, and the development of a Project Charter to govern the implementation.

LCdr Kathy Travis was tasked with managing this project on a day-to-day basis.

Figure 2.0 Navy Output Model

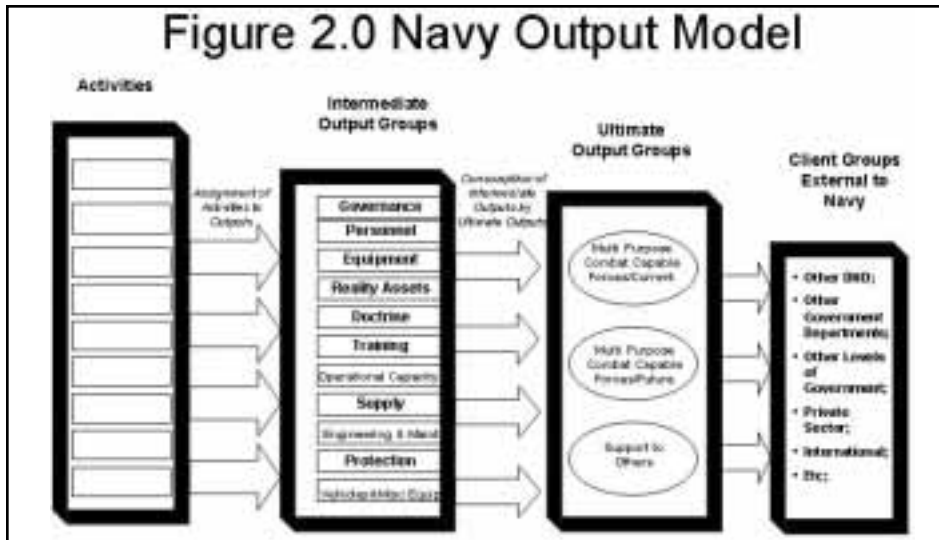
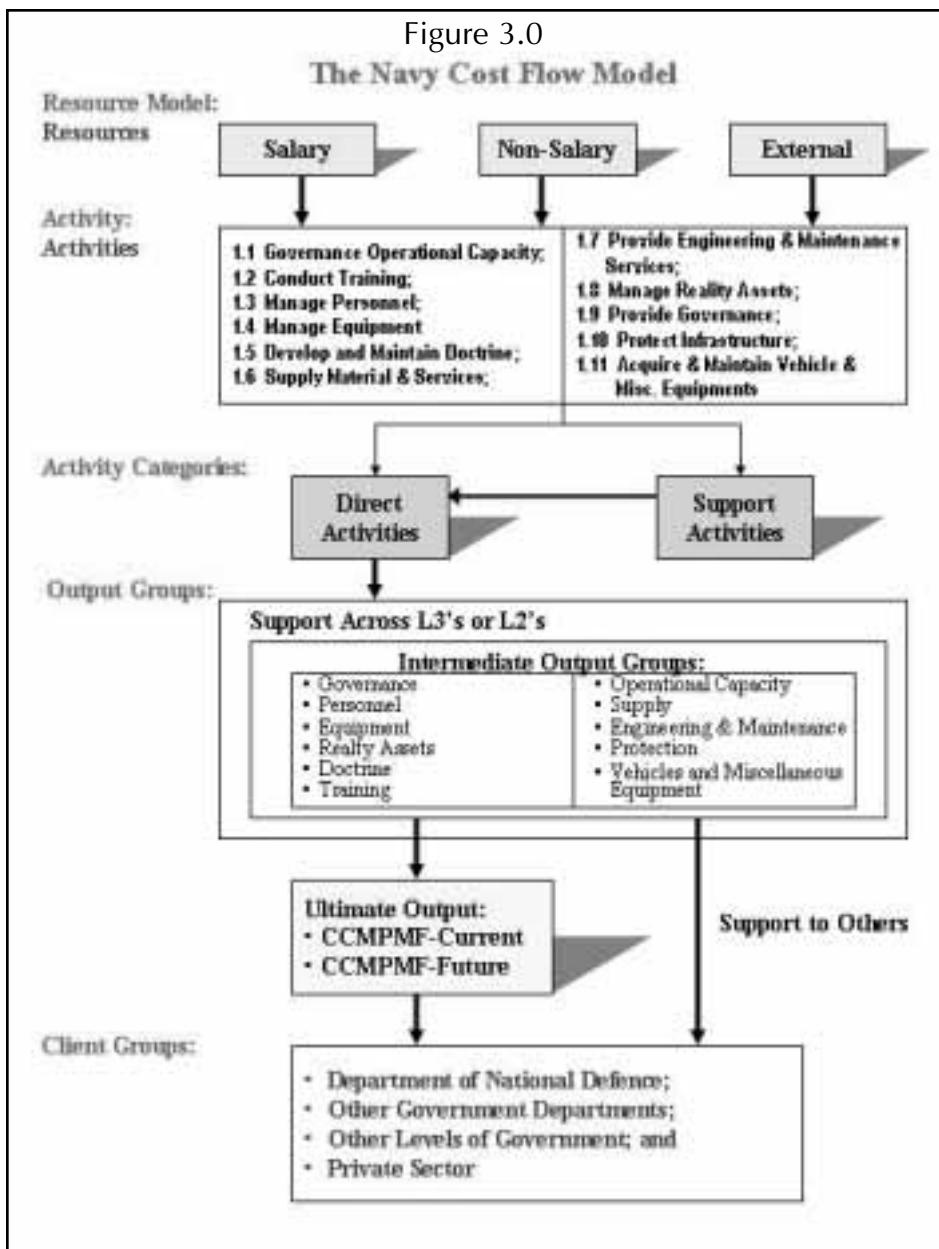


Figure 3.0

The Navy Cost Flow Model



Capitalizing upon their experience with a number of other federal departments, AIM – Automated Information Management Corporation (AIMCORP) was contracted to provide ABC consulting services.

The initial Project Charter had intended to meet the goal of delivering a Pan Naval ABC Model by the end of fiscal year 2003/2004 by completing ABC Models in the remaining organizational units, with consistent structure and detail, and retrofitting the previously completed ABC models to the same structure and detail. To this end, the Navy embarked on the following project approach:

As Figure 1 depicts, establishing the overall model structures and logic upfront is the most critical step in the process. This step – Develop Cost Flow Model – provides the blueprint for how all the new Navy ABC models would be developed and previously developed models refined. The Cost Flow Model depicts the level of decomposition detail of resources, activities, outputs and clients, as well as the level of detail for which relationships between those elements will be developed.

In the Navy's case, it was decided to start in August 2002 with one element of the cost flow model, the outputs. The output model was selected as a starting point since its utility would be not only for ABC, but also for Capability Planning. Capability Planning is the means by which the Navy plans its resources and work, and organizationally is the responsibility of Maritime Services Management Team (MSMT). MSMT led the development of the output model, with the assistance of the ABC project team. The output model is the cornerstone of Capability Planning as it provides an object to utilize resources and activities to produce, while also providing an object to measure performance against. Furthermore, the intention was to utilize this output model in the upcoming planning cycle. As such, the output model needed to be taken seriously, with the necessary commitment to complete the model in a timely manner. As this was only one piece of the overall Cost Flow Model, it was critical to ensure that the work done on the output model integrated into the vision of the ABC model. Through consultations with representatives from the three Formations, CFMWC and the Headquarters staff, an

output model was developed and eventually promulgated.

The output model (figure 2) was structured to include *Intermediate Outputs* and *Ultimate Outputs*. At the end of the day, the Chief of Maritime Staff would need to know the cost to generate and maintain Combat Capable Multi Purpose Maritime Forces (CCMPMF), as well as the cost to support others external to the Navy. Thus, the ships and submarines were made to be the Ultimate Outputs within the model. The Intermediate Outputs were necessary so that managers at other levels in the organization could determine the level of effort and costs associated with delivering their specific services, such as Procurement Services or Facilities Maintenance Services. The cost of these Intermediate Outputs would flow to the Ultimate Outputs, allowing the Navy to see the full cost of fulfilling its mission/vision.

In progressing the remaining elements of the Cost Flow Model in February 2003, it was decided to not only build the blueprint for the individual Navy ABC Models, but to also build an actual populated Pan Naval

ABC Model based upon the blueprint. This model would be developed with the intention to demonstrate what the Pan Naval ABC Model would look like at the end of this process. The intention was to provide something tangible, in a short period of time, which managers could touch and feel and determine its utility and power. This model would include all of the resources, activities, outputs and clients of the Navy.

To get to this demo model, the Navy Cost Flow Model was completed. Figure 3 provides a high level overview of the Navy Cost Flow Model.

The cost flow model includes detailed information on the following key elements:

Resources:

Describes how resources will be structured within the ABC model and to what level of detail they will be analyzed.

Activities:

Describes how activities will be structured within the ABC model and to what level of detail resources will be assigned. Since the Navy's output model was accept-

ed as a common structure, it was decided to use the outputs as a starting point for the creation of the activity dictionary. To keep things simple within the demo model, for each output, a corresponding activity was created, thus ensuring a one to one relationship between activities and outputs.

Outputs:

As previously discussed, outputs for the Navy ABC Model would be taken from the already developed Output Model.

Clients:

High-Level client groups were established based upon the existing Capability Plans.

Assignments:

Describes how the following will be assigned: resources to activities; support activities to direct activities; activities to intermediate outputs; intermediate outputs to ultimate outputs; and ultimate outputs to clients. In some cases, specific metrics are available in current systems to populate these assignments. In others, manager esti-

mates would need to be relied upon as a starting point. The intention in the demo ABC model was to keep assignments simple and at a high-level in order to minimize the number of data points and reduce data gathering requirements.

An expenditure extract for fiscal year 2002/2003 was taken from the DND Financial and Managerial Accounting System and used to populate resources within the model. Based upon a small number of working sessions, and a number of assumptions, all resources were assigned to activities. Where useful driver data existed, it was used to assign Intermediate Outputs to Ultimate Outputs; otherwise, for purposes of the Demo ABC Model, very rough estimates and assumptions were made. Again, the intent was not to have a model that provided cost information for analysis at this stage, but to deliver a model that could allow managers to better understand what would be available to them at the end of this process.

Developing the model in a manner that would allow for dealing with the sheer size of the model, as well providing a user-friendly interface for accessing and navigating the model, was critical. If the demo model could not be adequately "demonstrated" in a manner that managers would respond to, it would be worthless. To this end, it was decided to establish a datamart in Microsoft Access to store and organize the relevant data and structures (i.e. Financial Expenditures, Activity Dictionary, Output Model, Assignments, etc.). This datamart would prepare all of the elements necessary to set-up the model within an Off the Shelf ABC Modeling tool. In this case, SAS ABM (formerly named OROS) was selected as it had previously been utilized in a number of the other Navy models developed over the years. It is also the tool currently utilized by many other Federal Government Departments. SAS ABM provided the engine to undertake the calculations necessary to compute activity, output and client costs. This cost information was returned to the Microsoft Access datamart, where it was further prepared and transformed into a navigable data cube using Cognos Transformer. Viewing the cube in Cognos Powerplay allows managers to slice and dice cost information, drill into details and view data in a three dimensional man-

ner.

At this point (April 2003), the Navy had a working Demo ABC Model that included the detail of all resources within the Navy, assigned resources to activities, activities to intermediate outputs, intermediate outputs to ultimate outputs and ultimate outputs to clients at a very high level, based upon a large number of assumptions. This was acceptable, as it was not intended for the demo model to be utilized in support of decision making, only to exhibit the wealth of information that would be available in a final Pan Naval ABC Model.

The Demo ABC Model proved intriguing to everyone who had the chance to view its contents. The model not only provided the ABC Project Team with a tool to demonstrate what could ultimately be done with a Pan Naval ABC Model, but also had a major impact on the future course of the project.

While the ABC Project Charter had intended to provide strong *top-down* direction to facilitate a consistent *bottom-up* construction and retrofitting of individual ABC models, the development of the demo model provided the Navy with the opportunity to reassess this approach. Revising existing ABC models and building new ABC models, where necessary, would be a lengthy process and would require a lot of effort on a variety of fronts. With this daunting challenge at hand, it was proposed to build upon the Demo ABC model that had already been developed, and transform it into a Strategic ABC Model for the Navy. The data and structures were already resident within the model. If the assignments between resources and activities, intermediate outputs and ultimate outputs, and ultimate outputs and clients could be validated and further detailed, the Navy would have a Strategic ABC Model that provided information not only from a Navy wide perspective, but also at the Formation level, and on down into every single cost centre.

MS Compt/SS challenged the ABC Project Team and Working Group to make the Strategic ABC Model a reality over a four-month period over the summer of 2003, in time to support the fiscal year 2005 Capability Planning meetings held in the fall of 2003. The project had shifted from developing models in a *bottom-up* fashion, to

building one Pan Naval Strategic ABC Model from the *top-down*.

To achieve this ambitious goal, working sessions were planned and conducted across the Formations, CFMWC and at the Naval Headquarters in Ottawa. Working sessions were conducted with managers representing groups of cost centres. With the cooperation of managers across the Navy and the coordination and effort of the ABC Working Group, the ABC Project Team was able to gather data to assign resources to activities within each cost centre. In addition, the team was able to capture the assignment of Intermediate Outputs to Ultimate Outputs and Clients. These inputs into the Pan Naval Strategic ABC Model were compiled and returned to the managers via the ABC Working Group for validation and refinement.

The Pan Naval Strategic ABC Model was delivered in October 2003 and was one of the tools utilized in conducting its capability planning work for fiscal year 2005. The further integration of the costing model with the capability planning process in order to allow variance and trend analysis is one of the Navy's continuing goals as it moves forward with ABC. A simple and repetitive concept of operations for sustaining the Strategic ABC Model is also part of the Navy's current efforts to ensure the model continues to be maintained and improved over the years.

To further solidify Navy senior management commitment to ABC and in particular the utilization of the Strategic ABC Model, the model was presented to the Naval Board Executive Committee (NBEC). The model was received with great interest and the Chief of Maritime Staff reaffirmed the need for such a tool within the Navy. The NBEC agreed that the Strategic ABC Model merited analysis and provided an efficient and effective alternative to the *bottom-up* approach that had struggled to reach a successful conclusion over the years. Working within a single integrated Pan Naval ABC Model, the Formations, CFMWC and Headquarters staff will have the flexibility to request more detailed models in specific areas where the cost and effort of undertaking the analysis is less than the expected benefits. Naval training is one area under consideration for this more detailed work.

As mentioned earlier, other federal government departments have also embarked upon cost management initiatives. Departments such as Citizenship and Immigration and Canada Customs Revenue Agency are among those implementing a *top-down* approach similar to that of the Navy.

It is clear from these examples that there are a number of benefits from a *top-down* approach to implementing a Strategic Cost Management Model, including the following:

- Produces a model focused on senior management needs, thus increasing the chances of continued leadership and commitment;
- While focused on senior management needs, the model still provides information useful to managers at lower levels within the organization;
- Provides an opportunity to further detail the model in specific areas, *where necessary*, to meet specific detailed information needs, as opposed to building in the detail throughout the entire model unnecessarily. Furthermore, ensures that any further detailing is within the framework of the overall model, and thus will not encounter any roll-up issues;
- Produces results in a shorter timeframe, with a usable model that can support decision making and can be further refined and improved in a more efficient timeframe;
- Simplifies model maintenance as it relies heavily on central efforts for the technical maintenance of the model. Decentralized efforts are more related to the update of model logic, not the technical aspects of the software or database; and
- Reduces the cost of implementing and maintaining the model.

As with most management initiatives, strong vision, leadership and commitment from the top are critical. In the case of Strategic Cost Management, recent examples have shown us that development and implementation is best served from the top as well. While the *top-down* approach is no guarantee of success in implementing cost management models, there is no doubt that the shorter timeframe and reduced costs of implementation alone will provide you and your management team with the conditions necessary for a running start. ■