White Paper

Understanding the APQC Process Classification Framework

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David and Roderick are passionate about helping organizations understand and document their own business processes, using frameworks such as APQC's Process Classification Framework and standards such as BPMN as well as applying simple approaches to improve and simplify these business processes.

Given the difficulties faced in many economies around the world, many businesses have turned to making do with the limited resources at their disposal. There are a number of ways of achieving this objective, such as:

- Investigating the use of new technologies to reduce costs;
- Simplifying business operations by reducing waste;
- Lowering production and administration costs; and
- Developing new approaches and products to provide a strategic advantage over their competitors.

Each of these scenarios requires your business or organization to understand your processes in more detail than most organizations do now. It may seem daunting for many Small to Medium sized Business (SMB's) compared to larger businesses and corporations, but learning to document business process and the availability of simple tools to achieve it are well within the reach of all businesses and companies, regardless of size. Knowing how to get started, however, is often seen as the hardest problem.

This white paper is primarily targeted at SMB's as they are less able to afford Management Consultants to assist them. However, the principles outlined in this paper are relevant to businesses and organizations of all sizes.

Process frameworks provide an excellent means of helping you scope your business process initiatives, as they provide you with:

- The foundation structure for your business processes;
- A starting list of the processes to include; an
- A starting point for working out what to include and what is important to you.

There are 4 reasonably well-known Process Frameworks out there today, however we will be concentrating on the APQC's Process Classification Framework (PCF), which is probably the most well known and commonly used framework.

We will start by providing some context about Process Frameworks to explain:

- Why a means of classifying Processes is important ● What a Process Framework is;
- How to use Process Frameworks; and
- How to apply the Process Frameworks, by example.

We will then concentrate on the APQC Process Classification Framework by outlining:

- Who the APQC are;
- What the APQC Process Classification Framework is; and
- How you can use the APQC PCF:
  - ◊ When Scoping a Process Project
  - ◊ In a Process Documentation project; or
  - ◊ To structure your Process Repository

Process Frameworks

Why do I need a process framework?

A process framework provides:

- A checklist for identifying candidate processes undertaken within your business or organization;
- A structure for classifying the processes you have identified into groups of related processes;
- A basis for determining how process ownership can be assigned;
- A foundation for structuring a process repository; and
- Visibility of processes to the wider organization.

The most common reason why people use Process frameworks is to help them classify processes into a classification structure in order to better understand how the processes relate to each other and how they are a part of getting things done.

What is a process framework?

A Process Framework is a means of grouping processes into appropriately related categories. Most process frameworks use the concept of Value Chains as the basis of these categories.

The concept of a Value Chain was originally defined in Michael Porter's well known book, "The Competitive Advantage: Creating and Sustaining Superior Performance", in which Michael Porter explains:

> "Every firm is a collection of activities that are performed to design, produce, market, deliver, and support its product. All these activities can be presented using a value chain.." (shown in figure below) "A firm's value chain and the way it performs individual activities are a reflection of its history, its strategy, and its approach to implementing its strategy"

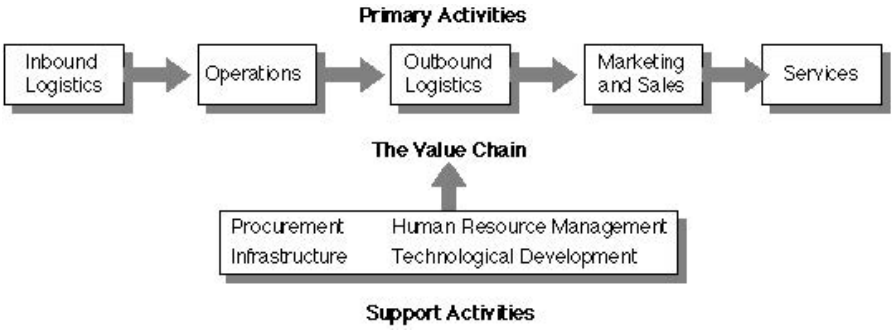


Figure 1: Michael Porter's Value Chain Concept[1]

The Institute of Manufacturing, part of the Department of Engineering at Cambridge University further explains that Value Chains are:

> "…based on a process view of organizations, i.e. the idea of seeing a manufacturing (or service) organization as a system, made up of subsystems each with inputs, transformation processes and outputs. Inputs, transformation processes, and outputs involve the acquisition and consumption of resources - money, labour, materials, equipment, buildings, land, administration and management. How value chain activities are carried out determines costs and affects profits."[1]

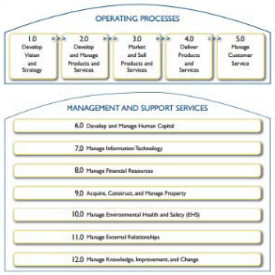
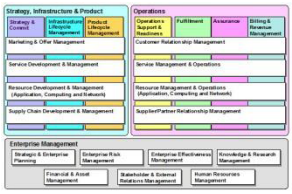
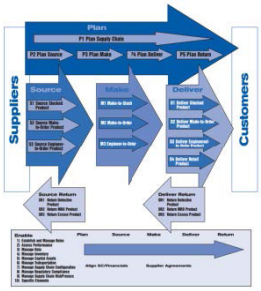
The category of Primary Processes (or Activities) forms the Value Chain of an Organization and is where it derives revenue and incurs operating expenses, hence the term Value Chain, which defines the chain of processes from which value is derived for an organization.

The category of Support Processes (or Activities) defines the indirect costs incurred when managing and supporting an Organization. In more recent times, it is now more common to split Support Processes into Management Processes and Support Processes, to separate the development, implementation and management of an Organization's strategy from the Processes related to the support of an Organization, such as managing Finances, Human Resources, Infrastructure and Information Technology.

Most organizations are usually able to easily identify and define the processes that make up their Value Chain, (i.e. Operations Processes) however they often struggle to identify the Management and Support Processes (i.e. Processes within the other parts of their business). This is one area in which Process Frameworks can be very useful, as they provide a starting checklist to identify not only Operational Processes, but also Management and Supporting Processes.

What process frameworks are available?

There are a number of well-known process frameworks available. The following table lists four of the most well-known Process Frameworks:

APQC PCF	The APQC Process Classification Framework (PCF) is arguably the most well-known and widely adopted process framework. The framework contains a generic cross industry framework and 11 industry specific frameworks.	 Figure 2: APQC PCF
eTOM	The Enhanced Telecommunications Operations Map (eTOM) is a framework for the analysis and improvement of telecommunications processes, with a focus on customer support and customer satisfaction.	 Figure 3: eTOM
SCOR	Developed by the Supply Chain Council, the Supply Chain Operations Reference (SCOR) is used mostly for industries in supply chain management. The model is structured around five management processes: plan, source, make, deliver and return.	 Figure 4: SCOR Model
VRM	Also developed using a supply chain approach, the Value Reference Model (VRM) is a very comprehensive model that can be adapted to any business	 Figure 5: VRM

Who are APQC?

APQC started as the American Productivity Centre (APC) in 1977 and was founded to improve productivity in the US. It became well known as a source of resources on productivity, quality, improvement methodologies, training, and advisory services. Over time, its name was changed to the American Productivity & Quality Center and then simply APQC.

The APQC was involved in Benchmarking, which formed the basis of the business taxonomy known as the Process Classification Framework (PCF).

How do I choose which one to use?

Each of the process frameworks has its own strengths and weaknesses; the APQC's Process Classification Framework (PCF) is probably the best known as well as the most easily accessible process framework. APQC provide open access to all versions of the PCF as well as information documents that describe each of the many Processes and Key Performance Indicators within the PCF.

It is important to select the right PCF for your organization. The Cross-Industry model is the best one to use for most organizations, unless your industry has its own version, as it is the most up-to-date and complete.

Introducing the APQC

What is the PCF?

The PCF is one of the APQC's best known speciality areas and underpins much of its Intellectual Property.

The APQC publishes a cross-industry PCF as well as 11 industry-specific versions, for industries such as:

- Automotive;
- Consumer Products;
- Education;
- Electric Utilities;
- Petroleum Production; and
- Pharmaceutical.

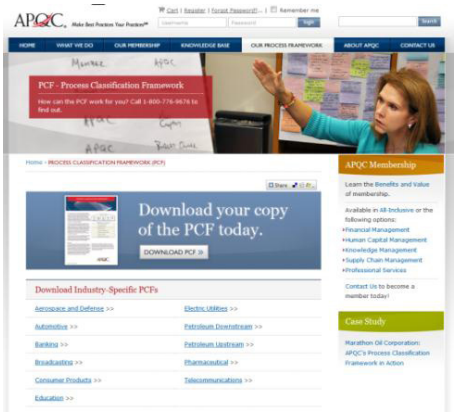


Figure 6: APQC Website Home Page

The PCF is freely available on the APQC website as a download in either PDF or Microsoft Excel formats

The download consists of a set of 12 process categories, 5 covering operational areas and 7 covering support areas. Each category consists of process groups that are further decomposed into individual processes.

When considered as a whole, they collectively represent the operation of any business or organization.

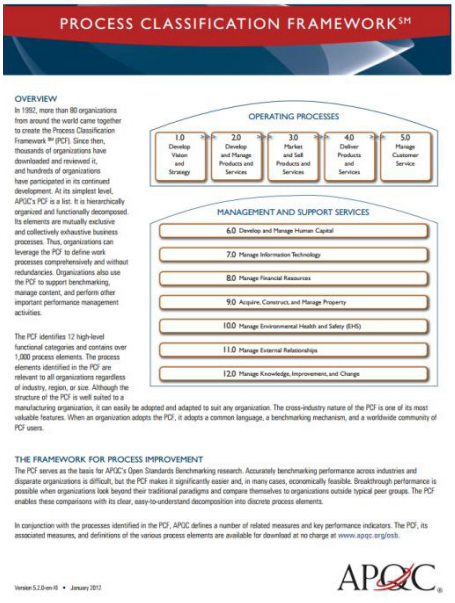
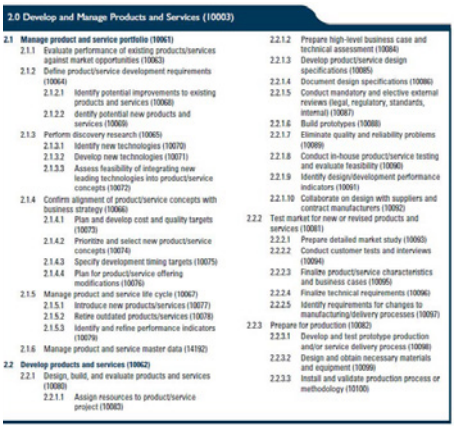


Figure 7: Front Page of APQC PCF Document

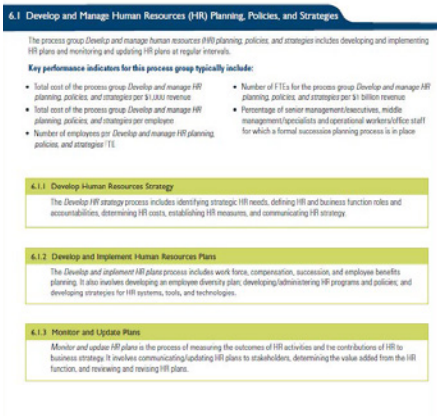
The PCF is structured into 4 Levels:

1. **Category:** The highest level of process in the enterprise, e.g. "Manage Supply Chain" or "Manage Customer Service".
2. **Process Group:** Indicates the next level of processes as a group of processes, e.g. "Perform After Sales Repairs" or "Develop Sales Strategy".


2.0 Develop and Manage Products and Services (10003)

2.1 Manage product and service portfolio (10061)
2.1.1 Evaluate performance of existing products/services against market opportunities (10063)
2.1.2 Define product/service development requirements (10064)
2.1.2.1 Identify potential improvements to existing products and services (10068)
2.1.2.2 Identify potential new products and services (10069)
2.1.3 Perform discovery research (10065)
2.1.3.1 Identify new technologies (10070)
2.1.3.2 Develop new technologies (10071)
2.1.3.3 Assess feasibility of integrating new leading technologies into product/service concepts (10072)
2.1.4 Confirm alignment of product/service concepts with business strategy (10066)
2.1.4.1 Plan and develop cost and quality targets (10073)
2.1.4.2 Prioritize and select new product/service concepts (10074)
2.1.4.3 Specify development timing targets (10075)
2.1.4.4 Plan for product/service offering modifications (10076)
2.1.5 Manage product and service life cycle (10067)
2.1.5.1 Introduce new products/services (10077)
2.1.5.2 Retire outdated products/services (10078)
2.1.5.3 Identify and refine performance indicators (10079)
2.1.6 Manage product and service master data (14192)
2.2 Develop products and services (10062)
2.2.1 Design, build, and evaluate products and services (10080)
2.2.1.1 Assign resources to product/service project (10082)
2.2.1.2 Prepare high-level business case and technical assessment (10084)
2.2.1.3 Develop product/service design specifications (10085)
2.2.1.4 Document design specifications (10086)
2.2.1.5 Conduct mandatory and elective external reviews (legal, regulatory, standards, internal) (10087)
2.2.1.6 Build prototypes (10088)
2.2.1.7 Eliminate quality and reliability problems (10089)
2.2.1.8 Conduct in-house product/service testing and evaluate feasibility (10090)
2.2.1.9 Identify design/development performance indicators (10091)
2.2.1.10 Collaborate on design with suppliers and contract manufacturers (10092)
2.2.2 Test market for new or revised products and services (10081)
2.2.2.1 Prepare detailed market study (10083)
2.2.2.2 Conduct customer tests and interviews (10094)
2.2.2.3 Finalize product/service characteristics and business cases (10095)
2.2.2.4 Finalize technical requirements (10096)
2.2.2.5 Identify requirements for changes to manufacturing/delivery processes (10097)
2.2.3 Prepare for production (10082)
2.2.3.1 Develop and test prototype production and/or service delivery process (10098)
2.2.3.2 Design and obtain necessary materials and equipment (10099)
2.2.3.3 Install and validate production process or methodology (10100)

Figure 8: Example from PCF PDF Document


6.1 Develop and Manage Human Resources (HR) Planning, Policies, and Strategies

The process group *Develop and manage human resources (HR) planning, policies, and strategies* includes developing and implementing HR plans and monitoring and updating HR plans at regular intervals.

Key performance indicators for this process group typically include:

- Total cost of the process group *Develop and manage HR planning, policies, and strategies* per $1,000 revenue
- Total cost of the process group *Develop and manage HR planning, policies, and strategies* per employee
- Number of employees per *Develop and manage HR planning, policies, and strategies* FTE
- Number of FTEs for the process group *Develop and manage HR planning, policies, and strategies* per $1 billion revenue
- Percentage of senior management/executives, middle management/specialists and operational workers/office staff for which a formal succession planning process is in place

6.1.1 Develop Human Resources Strategy

The *Develop HR strategy* process includes identifying strategic HR needs, defining HR and business function roles and accountabilities, determining HR costs, establishing HR measures, and communicating HR strategy.

6.1.2 Develop and Implement Human Resources Plans

The *Develop and implement HR plans* process includes work force, compensation, succession, and employee benefits planning. It also involves developing an employee diversity plan; developing/administering HR programs and policies; and developing strategies for HR systems, tools, and technologies.

6.1.3 Monitor and Update Plans

Monitor and update HR plans is the process of measuring the outcomes of HR activities and the contributions of HR to business strategy. It involves communicating/updating HR plans to stakeholders, determining the value added from the HR function, and reviewing and revising HR plans.

3. **Process:** A series of activities converting inputs into outcomes, e.g. “Develop sales forecast” or “Create materials plan”.

4. **Activity:** Indicates key events performed when executing a process, e.g. “Receive Customer Requests” or Resolve Customer Complaints”.

In addition to the PCF, the APQC has also begun publishing definitions and key measures for the processes.

The APQC has currently published 8 of the 12 process categories for:

- Product and Service Development Definitions and Key Measures;
- Marketing and Sales Definitions and Key Measures;
- Supply Chain Definitions and Key Measures;
- Customer Service Definitions and Key Measures;
- Human Capital Definitions and Key Measures;
- Information Technology Definitions and Key Measures;
- Financial Management Definitions and Key Measures; and
- Knowledge, Improvement, and Change Management Definitions and Key Measures.

However, these are in the core value chain and support areas, which are typically the source of unexpected costs within many organizations today.

Applying the APQC’s PCF

Overview

There are many practical ways of utilising the APQC’s PCF. For example the PCF can be used to provide:

- The framework and checklist of processes to use when you are scoping Process-related projects;
- The basis of your process repository structure, whether you using a sophisticated tool such as Orbus Software’s iServer, SharePoint, or a simple set of folders on a shared network drive; and
- The starting point for a Process Documentation Project by giving a detailed list of processes.

Example 1: Scoping a Process Project

The comprehensive coverage of APQC’s PCF makes it quick and easy to scope a process project, simply step through each process, identifying whether it is either in or out of scope (or maybe unclear).

In this example, we are scoping a project to review how well a Human

Resource Management System supports our existing business processes. The diagrams following were created using Microsoft Visio.

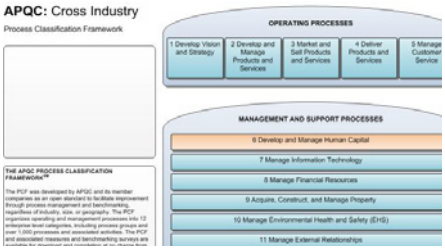


Figure 10: Example of Step 1.

Figure 11: Example of Step 2.

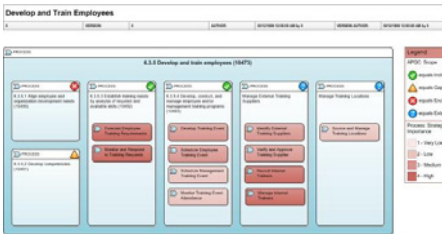


Figure 12: Example of Step 3.

Step 1:

Identify which of the categories (i.e. Level 1 items) are going to be of interest to the Project.

You may wish to use colour to show the categories within the project's scope (figure 10)

Step 2:

For each of the Process Groups (i.e. the Level 2 items) within the "in scope" categories, review each of the Processes to determine whether or not they are within the scope of the project. It is useful to visually show the results of your analysis (figure 11). Depending on the purpose of your project, it may also be appropriate to indicate whether there is a gap in meeting requirements of the current processes.

Step 3:

This last step is an optional one, particularly if speed is of the essence, but it is of great benefit because it provides detail for additional planning.

In the figure 12, the strategic importance of the Activities that are contained within the Processes shown to be in scope are distinguished using colour.

An alternate approach would be to create an assessment of their current fit for purpose.

Example 2: Process Documentation Project

When your organization decides to document its process, the PCF is a useful starting point, as it helps you:

- Define the scope of your Project;
- Define each of the processes being documented; and
- Create an anchor structure for all processes within the organization.

The following steps are a guide to documenting your processes using the PCF:

1. Select the PCF version that best fits your business. Use the Cross-Industry PCF if nothing else fits.
2. Prepare a list of processes to be covered. Match your processes against those in the PCF by comparing the processes in the PCF against what happens in your business. Continually ask yourself what is missing - the PCF may have processes you may have not even considered.

3. Define the scope of each of your processes, in terms of:

    - What is the purpose of the Process?
    - How does it start and how does it end?
    - What Activities / Tasks does it include?
    - What happens next?

4. You can now map each of your processes, starting with the important ones first. Whether you are using Orbus Software's iServer or just Visio, you can link each Process Map to the list of Processes customized from the PCF.

We recommend that you consider adopting:

- The Business Process Modeling Notation (BPMN); and
- A "Verb Qualifier Object" approach to naming your processes and activities (figure 13)

Figure 13: Recommended Process Name Approach

Orbus Software has available for download:

- Introduction to BPMN 2.0 - Free Presentation;
- BPMN 2.0 - Visio Stencil Starter Pack; and
- 10 Key Lessons for Business Process Modeling.

Example 3: Structuring your Process Repository

The PCF can provide a useful reference when deciding the structure of your Process Repository.

As previously shown, the PCF is structured into 12 Categories and each of these Categories are further divided into Process Groups. Categories and Process Groups can be used to structure your Process Repository. Create a folder for each of the Categories within the scope of your Process Repository and then within these folders create additional folders for each in-scope Process Groups. Below are two examples of how to set up folder structure for a PCF based Process Repository. You could use a simple Folder Structure (figure 14 and figure 15), which could

be also replicated in SharePoint or a Document Management System, or you could structure it within a Business process analysis tool such as Orbus Software's iServer (figure 16 and figure 17).

Figure 14 Example using a Folder Structure

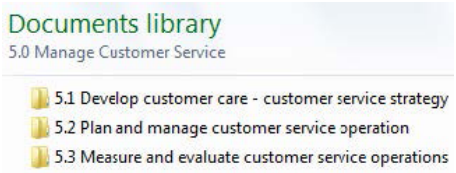


Figure 15 Example drill-down Folder Structure

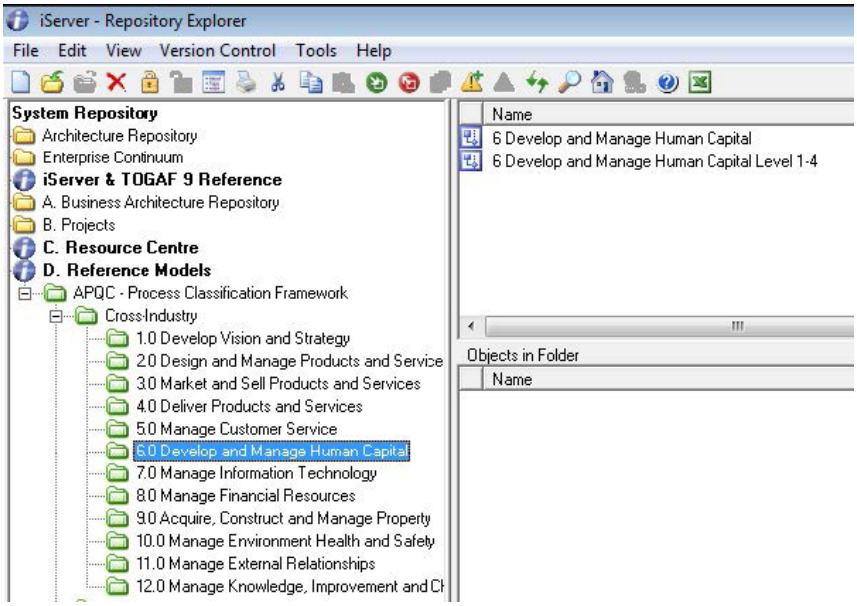


Figure 16 Example APQC PCF Models in iServer

And finally…

As we have seen, the APQC's PCF provides a useful starting point for many types of process related projects within your business, such as:

- Assisting you to scope the processes in your project;
- Helping you to identify and define the processes covered by your project;
- Structuring the repository for your process documentation; and
- Benchmarking the performance of your processes inside and outside your business.

So, if you're unsure where to start your process related project or unfamiliar with documenting processes, then remember the APQC's PCF is a good place to start! So what are you waiting for…

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