Process Survey Tools –
Philips's experience with accessing the maturity of business excellence in Purchasing and Supply management

EIPM

Geneva 7th December 2006

Presented by Jan van Mierlo
How to bring "big money" to the bottom line via the Process Survey Tool?
Seven forces/challenges are driving the change to integral supply (chain) management

1. Shortening of the product/technology lifecycles, and the necessity to implement life cycle management.
2. Concentration on core activities, and find Best In Class partners for defined non core activities.
3. Increasing importance of integral supply management as a consequence of outsourcing and globalization. Managing the virtual supply chain.
4. Growing importance of outsourcing and relationship management (EMS/OEM/ODM)
5. Increased focus on Cash Management, Return on Assets, and improved integral performance. Value chain management.
6. Need to reduce complexity, increase innovation/creativity, and shorten Time To Market and cycle times through timely supplier involvement, rationalization and diversity reduction.
7. Risk management / Sharing of risks across more partners, increase forecast reliability through the total chain and supplier certification/development
Quick wins in price by global approach
Set conditions for improvements in:
• Quality
• Logistics
• Standardization (LSDB)
• Reduction supplier and component base. Creation of SBMT structure

1996/1997

1998/1999

2000/2001

2002/2004

Manage

• Completing the organization
• Continue leverage and price reduction
• Continue standardization
• Setting world class standards
• Elaborate required strategies
• Supply participation in PCP
• Process Survey tools deployment/Training

Competence

• Align the organization to the business requirements
• Provide the enablers (PST’s), and start peer auditing
• Supplier integration in ORP
• Campus suppliers
• Outsourcing
• Supplier Quality Assurance
• Strategic cost management

Supply Integration

• Maximum supplier technology and product contribution
• Further integrated supply chain management from suppliers to PCE customers
• Full service and system suppliers
• Integrated Process Survey Tool Audits
Purchasing and Supply (Chain) Strategy 2006/2007

Full Supply (Chain) Management

Supply Integration

- Maximum supplier technology and product contribution
- Realigning Organizational Construct to Business requirement
  - Integrated Process Survey Tool Audits
- Fully integrated supply chain management from suppliers to PCE customers
- Sustainability
- Full service and system suppliers

2002/2004

2005/2007

• Fully integrated value chain:
  • matching demand & supply management
  • Leveraging across divisions.
• e-procurement BOM and NPR
• e-logistics: warehouse & transportation management e.g. Vendor Managed (Consignment) Inventory
• trading: use of auctions as integral part of Supply process
- Outsourcing EMS-OEM/ODM and cooperation across divisions
  • More modular buying, finishing technology, SW
  • Pro-active supplier development/Certification
Philips Journey of PST’s

• Start and implementation of PST’s in 1998 at the moment we started also with implementation of EFQM.
  – Taken out of a benchmark study about best Purchasing and Supply Management tools.

• Assurance of full top management commitment based on following factors:
  – Full buy in of all Purchasing managers world wide in 1998, and part of appraisal/bonus system. (~20 sites worldwide covering 12000 employees)
  – Creation of a Supply Management Excellence manager, responsible for the deployment of the whole process across the world. (Combined function).
  – Continuous Cross functional Training worldwide of relevant employees
  – Self assessment and peer assessments on a yearly basis since 1999, directly linked with corrective action plans, and still running in all sites and extended to key suppliers.
Reaching continuously higher levels of performance with Process Survey Tools is a continuous journey.
THE PROCESS SURVEY TOOL
PURCHASING AND SUPPLY MANAGEMENT
Why to use it?

- It helps to improve your areas for improvement relating to a certain defined key process (MIRROR), and it brings money in the pocket.

- The tools give you tips to improve your operation, but also leaves for you room to set-up own priorities where to put higher focus (SEEING WAYS FOR IMPROVEMENT)

- Defined performance indicators can be transparently linked to the PST elements and EQA model (BETTER RESULTS, AND TRANSPARANCY)

- It helps to further strengthen your continuous improvement activity (CULTURE-EFFECT)

- Being a standardized tool, you can compare yourself with others (COMPARISON)
Process Survey Tools

1. The different process survey Tools

2. Definitions of the key process elements
   In Purchasing and Supply Management

3. A maturity scale

4. World class descriptions

5. A maturity profile

6. Profile comparability
Purchasing and Supply Chain World-Class Excellence

STRATEGIC PROCESSES

- **I** Insourcing / Outsourcing
- **II** Develop Commodity / Article Group Strategies
- **III** Establish and Leverage a world-class Supply Base
- **IV** Develop and Manage Supplier Relationships
- **V** Integrate Suppliers into the new Product / Process Dev. Process
- **VI** Integrate Suppliers into the Order Realization Process
- **VII** Manage Costs Strategically across the Supply Chain
- **VIII** Supplier Development and Quality Mgt

INTEGRATED, ALIGNED AND GLOBAL

Source: Robert M. Monczka, Ph.D.

Geneva EIPM 11th Annual Conference
Structuring the Eight Strategic Processes

- **Integrate Suppliers in Development**
- **Supplier Development & Quality Mgt**
- **Integrate Suppliers in Order Realization**
- **Integrate Suppliers in Development**
- **Establish a world-class Supply Base**
- **Develop Commodity/Article Strategies**
- **MT deployment/involvement and support**

*Insourcing/Outsourcing determines the Interface with the Supply Market*
Purchasing and Supply Chain World-Class Excellence

STRATEGIC ENABLERS

I. Establish globally integrated and aligned purchasing and supply chain Strategies + Plans

II. Develop Organization and Teaming strategies

III. Deploy Globalization

IV. Develop purchasing and supply chain Measurements

V. Develop and implement enabling IS / IT systems

VI. Establish Human Resource development and training

INTEGRATED, ALIGNED AND GLOBAL

Source: Robert M. Monczka, Ph.D.
1. Process Survey Tools

- Tools for assessment of **key** and supporting **processes**
- Measure the **maturity** of the defined key business processes and achievement of results.
- Identify **opportunities for improvement**, thus becoming more competitive
- Enhance learning through sharing **Best practices**

![Process Survey Tools Diagram](image-url)
Key elements are sub-processes, or key enablers.

**Element 1:**
In and outsourcing Strategy.
What is core and non core?.
What is the decision making process?
Who is involved?
2. Definition of the key Process elements

Sub-processes or key enablers

Element 1:
In and Outsourcing

1. Process elements
2. Maturity scale
3. World-class
4. Maturity profile
5. Profile comparability

The PST Purchasing and Supply Management contains 14 elements
3. Maturity scale

Approach, deployment and results for each element at ten levels of maturity.

Your step score implies that you satisfy all the requirements of that step and all those below.

Example: score 5 means you satisfy 1 and 2 and 3 and 4 and 5.

Every element has a maturity scale of 1-10.
3. Two dimensions
The elements
The level from 1-10
### 3. Example PST assessment 2006 Purchasing

#### Elements 1 to 8 (processes)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 INSOURCING/ OUTSOURCING</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 COMMODITY STRATEGY DEVELOPMENT</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 SUPPLY BASE OPTIMISATION &amp; MGT</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 SUPPLIER PARTNERSHIPS</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 SUPPLIER INTEGRATION IN PCP</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 SUPPLIER INTEGRATION IN ORP</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 SUPPLIER DEVELOPMENT &amp; QUALITY MGT</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 STRATEGIC COST MANAGEMENT</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average 1 - 8:</strong></td>
<td><strong>4.4</strong></td>
<td><strong>5.0</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Elements 9 to 14 (enablers)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9 STRATEGIES AND PLANS</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 ORGANIZATION AND TEAMING STRATEGIES</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 GLOBALISATION</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 MEASUREMENTS</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 IS/IT SYSTEMS</td>
<td>7</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 HUMAN RESOURCE MANAGEMENT</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average 9 - 14:</strong></td>
<td><strong>5.0</strong></td>
<td><strong>5.7</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total average scoring 1 - 14:</strong></td>
<td><strong>4.6</strong></td>
<td><strong>5.3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Example PST assessment 2006 Purchasing

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Insourcing/Outsourcing</td>
<td>2 Commodity strategy</td>
<td>3 Supply base optimization</td>
<td>4 Supplier Partnerships</td>
<td>5 Supplier Integration in PCP</td>
<td>6 Supplier Integration in OFP</td>
<td>7 SDM and Quality Mgt</td>
<td>8 Strategic Cost mgt</td>
<td>9 Strategies and plans</td>
<td>10 Organisation and Teaming</td>
</tr>
</tbody>
</table>

2003 average level 3.8
2004 average Level 4.2
2005 average level 4.9
2006 average level 5.4
Steps 7-10 describes how a world class company organizes and performs and are seen as best in class.
5. Maturity profile

Displays scores on a grid.

1. Process elements
2. Maturity scale
3. World-class
4. Maturity profile
5. Profile comparability
6. Profile comparability purchasing and feedback

Profiles of similar processes in different organisations or the same process at different dates

1. Process elements
2. Maturity scale
3. World-class
4. Maturity profile
5. Profile comparability

- **Organization A or date 1**
- **Organization B or date 2**
The Survey Tools in use...

- Self directed and self initiated
  
  *Owned by the user, our sites in the world*
  
  *Implemented in PCE in all 20 sites since 1998 and still running.*

- Easy to identify next level of capability
  
  *How to climb the staircase is obvious and deliver improved results, but linked to delivering the results*

- Measure progress twice or three times per year by self assessments and once in 2 years a **peer assessment** (In the beginning a peer assessment every year

  *Are we delivering rapid and consistent change? Measuring the progress. (Assessment ands Review)*

- Reinforce - Measure - Reward -

  *Application of the tool, not just the scores, but continuous improvement of defined key processes*

  *Every year again a new assessment cycle linked to payment and bonus system*
PST ASSESSMENT IN PRACTICE (EXAMPLE)
Insourcing / Outsourcing

Integrated, Aligned and Global

- Develop Commodity / Article Group Strategies
- Establish and Leverage a World-Class Supply Base
- Develop and Manage Supplier Relationships
- Integrate Suppliers into New Product / Process Development Process
- Integrate Suppliers into the Order Realization Process

- Insourcing / Outsourcing
- Manage Costs Strategically across the Supply Chain
- Supplier Development and Quality Management

critical Integrated supply chain processes
Element 1: INSOURCING/OUTSOURCING

Strengths:

- **Clear out phasing roadmap** available to reduce number of suppliers and concentrate on defined and agreed preferred suppliers.
  - MSL, Solectron, Radyssis Corp, Kontron, Avnet etc..

- **Cross functional team in place** to define the future CMS/EMS strategy across PMS-CMS with cross functional participation. Continuous attention needed for the structured implementation plan.

- Although some **basic benchmarking** is in place, further attention is required to make this process more robust and sound. Continue with planned initiatives with e.g Lucent etc…

- **CMS/EMS strategy available and deployed** and communicated into the PMS-CMS organization via BG Purchasing. Continuous attention is needed to achieve set targets, e.g use of PMS preferred list.
  - Sanmina-SCI, Jabil, Via systems, Elec&Eltec
In sourcing/outsourcing Strategies

<table>
<thead>
<tr>
<th>Level of Competitiveness relative to suppliers</th>
<th>Strategic Importance of Resources</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Low (non-core)</td>
<td>Maintain or Outsource&lt;br&gt;Company resources are not strategic but really profitable; in source as long as they are really profitable</td>
</tr>
<tr>
<td>High</td>
<td>High (core)</td>
<td>In source / Invest&lt;br&gt;Company resources are strategic and world-class; focus on investments&lt;br&gt;In technology and people; maximize scale and stay on the leading edge</td>
</tr>
<tr>
<td>Low</td>
<td>Low (non-core)</td>
<td>Outsource&lt;br&gt;Company resources have no competitive advantage</td>
</tr>
<tr>
<td>Low</td>
<td>High (core)</td>
<td>Collaborate / Maintain control&lt;br&gt;Company resources are strategic but insufficient to compete effectively; explore alternatives such as joint venture, alliance, licensing, etc.</td>
</tr>
</tbody>
</table>
Element 1: INSOURCING/OUTSOURCING

Recommendations:

• Further fine tune and finalize your total in-outsourcing strategy, next to CMS/EMS, in function of the business objectives, including all outsourcings activities for EMS/ODM/OEM, and SW. Make it an integral part of the Supply Management Plan, align all organizational and technical aspects, and scope issues and opportunities.

• Further continue with following important aspects:
  • Give direct and candid feedback on existing strategies if you cannot agree.
  • Be more specific about the gaps, and come with proposals how to solve it.
  • Be even more supportive and lead taking in the execution and deployment of defined strategies and make them really alive across the units. Assure effective deployment to key stakeholders.

• Integrate and involve the voice of your key stakeholders (business activities) even more in your overall strategy, and assure full buy in. Further intensify the contacts with the different Business Purchasing managers and install X-BG alignment with PMS outsourcing manager.

• Define and agree internally how you will integrate your CMS/EMS suppliers in the development process of new PCB’s, assuring that design rules of them are taken into account. Agree control points during PCP to verify whether these aspects are taken into account, and agree them upfront with your CMS/EMS suppliers.

• Install a program with target to achieve agreement & realisation of a productivity improvement plan with EMS suppliers regarding cost down achievements. Define and agree breakthrough targets with clear SMART target setting and measurement using productivity scans. (Staircase)
Increasingly rapid shortening of the product lifecycles require adequate supply models, skills and competences.

- Fast Exploitation of innovation to create mass market
- Focus on Reduction of Costs to Optimize the Profitability
- Definition and Implementation of Clear Exit Strategies
- Business Life Cycles are shortening
Example Product Lifecycle

Define what is EMS/OEM/ODM
NN is actually defined as EMS
Product Lifecycle and component Management

EMBRIONIC
In house developed EMS/CMS

TORNADO
In House Developed EMS/CMS + ODM

MATURE
Key component control ODM OEM

MILKING
OEM + Brand licensing

Component Control
WHY TO USE PST's
We are interested in own and supplier development

- **Common interest:**
  - Reduction of total integral supply chain costs
  - Getting and keeping the total value chain more competitive
  - Problems do not stop at factory door; they are cross-functional throughout the whole supply chain
  - Looking to the total picture, and joint improvements
  - The customers want competitive supply chain and not competitive single units. The total value chain.
DEPLOYMENT
Example Deployment concept

1. Kick-off workshop
2. Customization, adaptation
3. Process assessments
4. Improvement actions follow-up
5. Re-check
6. Review workshop

May
Jun
Jun~Sep
Nov
Dec
PST our way to sustainable business excellence in Purchasing and Supply Management

Thank You