

## **5. Possible Solutions**

These solutions are inclusive because the proposed solutions can work together at the same time because each solution has a main focus. Solution one focuses on the actors involved in GSP, solution two focuses on organization flows (between GSP internal and external actors) and solution three focuses on controlling the knowledge flow. However each solution can be used separately, because implementing a new logic can't be done all at the same time therefore it has to be divided in parts to be implemented.

Based on my experience in GS and by reading the presented literature, my recommendation is to implement solution one, as a start of service dominant logic implementation. However I am not excluding the use of the other two solutions or the three as an implementation package.

### *5.1 Solution #1: Knowledge transfer model for Global Sourcing based on Service dominant logic.*

Knowledge Transfer inside Global Sourcing is deficient because not everyone (that is involved in a GSP) receives complete information about processes therefore there is confusion about GSP status. Also tasks that are performed by sourcers are not recognized by buyers because they do not know that sourcers are doing it (following up when a closed process has been implemented). Through this model I intend to explain how knowledge flows between Global Sourcing and the Purchasing department. Furthermore they have to focus on the main goal of savings through GSP, therefore more attention must be given to closed GSP, because in order to create real savings they have to be implemented, not just closed. That is why I emphasize the part of monitoring closed GSP in my model.

Also they have to be aware in which parts they are exclusively responsible, but this part has been already written, but I would recommend that buyers should delegate information to sourcers (in order to diminish buyers' workload) and sourcers should take a more active role when making a follow up to a GSP.

## Why?

The major incentive for both sides, buyers and sourcers would be that they would improve their performance in savings by reducing time for closing GSP which means that more implementations (more savings) would be reflected for them. When improving their savings performance they can get a higher score when they are qualified, and this translates in higher personal monetary incomes. Also, they would be gaining a better understanding on how the work works and been able to propose further solutions for specific cases.

## How?

Main focus is given to actors that spread knowledge, therefore the model works as followed:

- 1- In the left side of the model there are Sourcers, which through channels send process information to Buyers.
- 2- This information has to be specific and have to add value to the process. This value means that every time there will be a knowledge transfer between sourcers and buyers they have to wonder “How much is being saved by this process?” This question will give a motivation for monitoring processes in order to land the expected savings.
- 3- The channels that are covered for this model are:
  - Communication with more than two people, which can include managers, other buyers which are involved in the process.
  - Platforms for sharing information, like purchasing software (Star, Tevon)
  - E-information. This means reports in Excel and Power Point that are created to have the latest information about the processes.

- 4- In the right side of the model there are Buyers, which are receivers and information senders.

Actors, buyers and sourcers, create relationships between them through channels, sharing information (GSP) and always considering this information value for the process. It has to be given priority to the information that is more important to the process. This information consist in prices (current and negociated price), if suppliers have the requirements that Germany established, time that will take to negociate with supplier and how much time the supplier will take to start producing with the new price (if supplier change is made).

In channels part, it can be identified tacit knowledge that has not being registered about a GS process. For example, if there is an interaction between a buyer with a sourcer and they shared information that is not registered, they can be aware that they have to convert their tacit knowledge into explicit knowledge. This information (that later will create knowledge) could be new Germany standards, new information about a supplier or new information about an expected price, and this information impact could change the whole GS perception. That is why it is important that in Channels, there has to be a registration of information that is a result between buyers and sources information transactions.

By doing so, communicative skills between sourcers and buyers will improve, and by this improvement a tighter relationship will be expected. Also it can increase both parties interest in GS processes closure.

### Users

The proposed model has to be used by sourcers and buyers, because between their relationships, higher knowledge exchange about GS process is being generated.

If desired, for a bigger end, this model could aggregate other parties like finance or logistic departments, but the main focus for this paper is between the knowledge transfer between buyers and sourcers.

### Resources

The required resources were planned based on my observations.

#### a) Human Resources

Sourcers: The amount of sourcers will be the same (one per each commodity, except Power Train and Electrics that are managed by the same sourcer because there are not much processes in both commodities) and also two additional GS staff that even though they are not directly responsible, they also manage processes (for financial issues or project issues) The total is 6 GS staff.

Buyers: The same amount of buyers (between 8 and 16 buyers per commodity . Approximately 56 buyers in total)

Staff of Volkswagen Institut: it takes two VWI staff to give a workshop

#### b) Time

Calculated time is 9 months. I would recommend one workshop per two weeks, and at the same time implementation should be done, because if there are some obstacles, they can be solved during workshop hours.

#### How the workshop would work

The workshop would be divided per commodity and implemented in three stages: Awareness, Discussions and Solutions.

#### Awareness

The first stage would last three workshops. In this stage, it is intended to teach how to improve communication between both parties (sourcers and buyers), the importance of converting tacit knowledge into explicit knowledge, how the relationships is structured (by using the model) and apply this model to every commodity.

Also it would be set that time would be the most important variable because GSP have to be closed on time.

W1: Presentation of every sourcer and every buyer. Presentation of the importance of knowledge

W2: Importance of converting Tacit-knowledge in Explicit Knowledge, and how to do it (databases)

W3: Presentation on how the relationship between sourcers and buyers is structured.

The second stage would last 8 workshops, where buyers and sourcers could discuss problems they faced every day (confusion about information for example), give the reason why it happened and how they fixed it, or if it hasn't been fixed, how they want to fix it. All the proposals should be written in order to create a manual for improving the relationship between sourcers and buyers.

These discussions would be moderate by two VW Institut staff because they are neutral.

This workshop would be divided by subjects: Problems with Platforms, Problems with E-information (Excel documents and graphics), Problems with specific GSP, and Problems with personal attitudes.

W1: Discussion of the problems with Platforms

W2: Solutions

W3: Discussion of the problems with E. Information

W4: Solutions

W5: Discussion of problems with specific GSP

W6: Solutions

W7: Discussion of problems with personal attitudes of colleagues

W8: Solutions

The third stage would last 8 workshops, and it would be the implementation of the written solutions. During the workshop contributions on how to implement the solutions and the results they are obtaining would be said. This last stage would be mostly to show results.

W1: Analysis of the results of the implementation of solutions for problems with Platforms

W2: Feedback and comments about the solution

W3: Analysis of the results of the implementation of solutions for problems with E-Information

W4: Feedback and comments about the solution

W5: Analysis of the results of the implementation of solutions for problems with specific GSP

W6: Feedback and comments about the solution

W7: Analysis of the results of the implementation of solutions for problems with personal attitudes of colleagues

W8: Feedback and comments about the solution

c) Cost

The cost will include:

- Workshop costs: \$27 MXN per person per day of workshop (inside the plant).
- This means 62 people taking 83 workshops. (16 workshops per commodity, five commodities, plus three workshops together.)
- This gives a total of \$138,942 MXN

- Electronic manual about the model. The costs for the manual would be time cost, and one human resource cost, because one person could do the manual during office hours.

I established workshop as the method of implementing my model because during my internship, I had the opportunity to be involved in training workshops about Lean management and I realized that the used method inside VWM for training is through workshops.

### Reach

In the end, these model efforts will have an impact in GS value, that is savings. If there is a more efficient knowledge transfer, knowledge will be transferred more quickly, closing the process in less time and achieving savings.

This model gives a better perspective in the places that relationships have to be strengthen, and from this model, it can develop into a bigger model that can include other actors (i.e. external actors), other information, other context and other channels.

When using this model, another issue can be taken into account: the priority will be given to those processes higher potential savings and not only focusing on the ones with bigger turnovers.

*Knowledge transfer model for Global Sourcing based on Service dominant logic.*



Source: Cedillo Lazcano, 2010

#### PROS

- The model is visual and easy to understand
- Priority is given to savings and monitoring instead of Turnovers
- Relationship between sourcers and buyers is structured in order to understand better the knowledge flow and identify relationship's bottlenecks
- There is no model that describes relationship between sourcers and buyers.
- Increase cooperation between sourcers and buyers

#### CONS



- Change the perspective of GSP savings
- Expensive workshops
- Some actors can reject the change of approach
- It could be that actors involved do not want to participate
- Managers in HQ (Germany) or managers in Mexico do not allow the use of the proposed model.

## *5.2 Solutionn #2- Knowledge Renewal Model for Global Sourcing based on Service dominant logic*

Knowledge renewal is important for an organization because, as Ballantyne stated, “Knowledge...as a fundamental source of competitive advantage”. This means that knowledge attributes (like spreading and replicating) can give the organization critical information about customers, competitors or market trends that can lead this organization to

create a competitive advantage by this knowledge (for example, if you know your customer is looking for product A but with other characteristics, knowledge will help you to create a new product that your consumer is looking for).

This model focuses on the type of knowledge flow, this means that is intended share knowledge in all directions (based on a network model).

### Why?

The incentive for using this model is that all parts will be involved in GSP, therefore it will allow to have a faster response to GSP changes. When having a quicker response, time for deciding process will decrease and also the time to gather suppliers' information for evaluating the best supplier for the part.

Furthermore because more actors are involved, monitoring responsibilities will be shared therefore more parties will be on the lookout for closing and implementing GSP.

All this efforts will reflect on closing quicker GSP and therefore a quicker implementation. By doing so, higher savings will be expected for VWM and an improvement between relationships between the users. This means also higher monetary incomes for all parties involved, either due of better grading or because if supplier works properly, he will be chosen for producing other VWM cars.

### How?

This model consists in five parts:

- Knowledge Flows: These flows are showed in the model by arrows, which means how knowledge transfer has to flow not just between sourcers and buyers, but also to managers, staff from other departments (that are involved in GSP, like finance)

- Sourcing: In the left side of this model are the sourcers, this means that even though knowledge flows have to be spread all over, main focus will be given to knowledge flow between sourcers and buyers.
- Buyers: In the right side of this model are the buyers, which as the sourcers, will have the main focus of this model
- Key Information: Is the difference between current price and expected new price (savings). This key information will control the content of the information. This means that in every knowledge flow that is intended, have to consider if this flow is helping to make a decision to achieve savings. If not, is better to not send information because it might produce unnecessary stock of information.
- Inverted triangle: The triangle is inverted because I am using a service dominant logic and under this logic, the organizational structure are shown like an inverted triangle showing that new priority are customers and that the old model (triangle) had to be inverted to adapt it into the new service logic.

### Users

The users for this model are sourcers, buyers, commodities managers , GS manager, central function manager, staff from logistic department, staff from finance department and suppliers.

Every actor that is involved generally in a GSP has been considered and each actor it is expected to contribute with the flow in order to share information available, like prices, updates, offers and HQ's requirements.

### Resources

- a) Human Resources: It will include GS staff (six), buyers (approx. 54), GS manager (one), Core functions manager (one), logistic staff (one), finance staff (one) suppliers (ten) and VWI staff (two). Total of 70 people involved.
- a) Time: The time I estimated is 8 months

### How the workshop would work

The workshop would be divided by commodity with every supplier representative present. VW Staff would include buyers, sourcers, GS manager, Core functions manager, logistic staff and finance staff. And suppliers would include a representative of the ten most used suppliers in GSP.

The workshops will be divided in four stages: Presentation of actors involved and the importance of spreading knowledge, GSP necessities and problems, Solutions and Implementation and Results

All the workshops would have the aim of teaching how information should be spread for every actor involved in GSP in order to determined them faster.

W1: Commodity E: Presentation of every VW staff and suppliers. Presentation of the importance of the spread of knowledge.

W2: Commodity I: Presentation of every VW staff and suppliers. Presentation of the importance of the spread of knowledge.

W3: Commodity M: Presentation of every VW staff and suppliers. Presentation of the importance of the spread of knowledge.

W4: Commodity P: Presentation of every VW staff and suppliers. Presentation of the importance of the spread of knowledge.

W5: Commodity X: Presentation of every VW staff and suppliers. Presentation of the importance of the spread of knowledge.

W6: Commodity E: Presentation of what is needed for every GSP: volumes, new prices, standards that have to be fulfilled for the Head Quarter (HQ) and the time this information

is required. Presentation of common problems with GSP and the responsible person for every stage in the GSP.

W7: Commodity I: Presentation of what is needed for every GSP: volumes, new prices, standards that have to be fulfilled for the Head Quarter (HQ) and the time this information is required. Presentation of common problems with GSP and the responsible person for every stage in the GSP.

W8: Commodity M: Presentation of what is needed for every GSP: volumes, new prices, standards that have to be fulfilled for the Head Quarter (HQ) and the time this information is required. Presentation of common problems with GSP and the responsible person for every stage in the GSP.

W9: Commodity P: Presentation of what is needed for every GSP: volumes, new prices, standards that have to be fulfilled for the Head Quarter (HQ) and the time this information is required. Presentation of common problems with GSP and the responsible person for every stage in the GSP.

W10: Commodity X: Presentation of what is needed for every GSP: volumes, new prices, standards that have to be fulfilled for the Head Quarter (HQ) and the time this information is required. Presentation of common problems with GSP and the responsible person for every stage in the GSP.

W11: Commodity E: Proposed solutions and how to implement them

W12: Commodity I: Proposed solutions and how to implement them

W13: Commodity M: Proposed solutions and how to implement them

W14: Commodity P: Proposed solutions and how to implement them

W15: Commodity X: Proposed solutions and how to implement them

*3 Months for implementation*

W16: Commodity E: Results of the implementation. Time and savings achieved will be taken as measures of improvement.

W17: Commodity I: Results of the implementation. Time and savings achieved will be taken as measures of improvement.

W18: Commodity M: Results of the implementation. Time and savings achieved will be taken as measures of improvement.

W19: Commodity P: Results of the implementation. Time and savings achieved will be taken as measures of improvement.

W20: Commodity X: Results of the implementation. Time and savings achieved will be taken as measures of improvement.

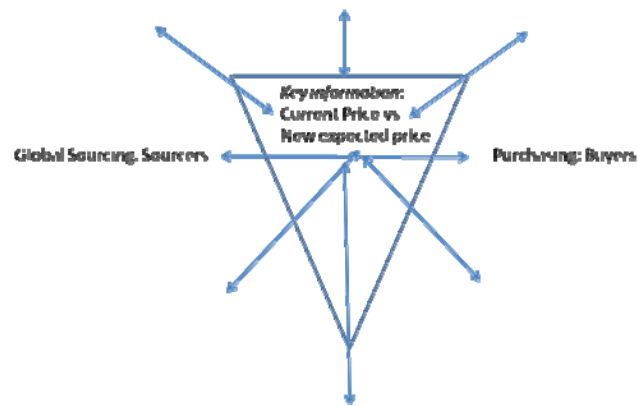
b) Costs:

- Workshop costs: \$27 MXN per person per day of workshop (inside the plant). This means 70 people taking 20 times a workshop for 8 months. This gives a total of \$ 37,800 MXN
  
- Electronic manual about the model. The costs for the manual would be time cost, and one human resource cost, because one person could do the manual during office hours.

Reach

I expect from this model to create an internal culture of sharing knowledge between every part involved in a GSP. I am aware that implementing this model is difficult because it involves many people and these people would have to contribute by themselves knowledge transfer in their areas, which will take long time. However if implemented correctly, it can be beneficial for the organization on long term because information flows will be working correctly, allowing all people involved to know every process status and therefore be able to make quicker decisions.

*Knowledge Renewal Model for Global Sourcing based on Service dominant logic*



Source: Cedillo Lazcano, 2010

Pros

- The model is visual, therefore network flows can be easily understood
- More people involved in monitoring GSP
- Saving in focus
- “Service Dominant Logic” used in model (inverted triangle)
- Increase the culture of sharing knowledge.
- Implementation of network flows

Cons

- Some actors could reject the model, specially suppliers and actors from other departments.
- Participants may perceive this model as difficult to achieve due of the several actors involved
- Managers in HQ (Germany) or managers in Mexico do not allow the use of the proposed model.

### *5.3 Solution # 3- Apply Control System to Control current knowledge flow.*

If Global Sourcing decides to maintain current knowledge transfer structure or current knowledge flow, a proposed solution is applying a tight structural control system focused on knowledge flow.

#### Why?

There is a possibility that managers, sourcers or buyers don't want to change current structure because it would imply big changes and even more efforts from them. Therefore if applying a control system to the current knowledge flow, it won't change the way they perform the knowledge transfer, but just control it. Y controlling it, just useful information will be used, and decisions can be made quicker.

#### How?

This structural control system will act through a written control of the knowledge they share. This written control will include the following information:

1. Type of shared information: HQ in Germany requirements (due dates, specifications for suppliers, specifications for the part), Process information (part number, description, process number, turnover and opened weeks), Supplier information (new offered price, supplier localization), Logistic information (new price with logistics costs added) and Finance information (savings).
2. Regularity of this sharing: This could be weekly, monthly, every two weeks, every six months or per year.



3. Reasons why this information is being shared and when an answer is needed: Could be “Authorization for cancelling this process (answer needed maximum in three days)” By this, if there is are other problems (for example that cancelling processes last generally more time than required) it can give a “red light” to see why cancelling a process are taking longer than expected.
4. Sender’s name and department: Herr Franz Bledl (Global Sourcing)
5. Receiver’s name and department: Frau Liana Nowke (Commodity Metals)
6. To which VW project is adding value: For example: JETTA A4 windshields.

Also it would be necessary to established people in charge with “power” that can give this control system a back up. I propose one sourcer, two buyers (per commodity), one from logistic, one from finance and the central function manager on the top for coordinating the others

By gathering this type of information, a database can be constructed (converting tacit knowledge into explicit knowledge).

#### Users

The users of this control system are GS staff (six), buyers (approx. 54), GS manager (one), Core functions manager (one), logistic staff (one), finance staff (one) Total of 64 people involved.

#### Resources

- a) Human resources: GS staff (six), buyers (approx. 54), GS manager (one), Core functions manager (one), logistic staff (one), finance staff (one) Total of 64 people involved. Also two members from Volkswagen Institut
- c) Time: It would be necessary four months to learn how to fill this new form. I consider that training once per month during four months and by every day uses it would be enough to use this form correctly and obtain a quicker information flow.

W1: Presentation of staff. Presentation of the benefits of using a written control of the shared information.

W2: Presentation of the format and which information is relevant for filling it.

W3: Practice of filling the format for sharing information

W4: Implementation

W5: Results

d) Costs:

- Workshop \$27 MXN per person per day of workshop (inside the plant). This means 62 people taking 5 times a workshop. This gives a total of \$8, 370 MXN
- Electronic manual about the model. The costs for the manual would be time cost, and one human resource cost, because one person could do the manual during office hours.

### Reach

This solution is the one that require fewer changes inside the organization. This solution was made for a management that needs to implement an immediate solution with aversion to change, however it will give just a tool to organize information flows.

### Pros

- Written control system easy to use
- Implementation is not expensive (in comparison of the other two solutions)
- Lower time of implementation (in comparison fo the other two proposed solutions)
- Low possibility of reject

- Better written coordination between GSP involved departments.
- Update the current organization chart
- Convert Tacit knowledge into Explicit knowledge

Cons

- No big change inside the Purchasing Department
- This measure could be considered as “Bureaucratic” (and therefore an obstacle more than a solution)
- Managers in Mexico and in Germany do not want to change organization chart (responsibilities)
- Managers do not want to change the current knowledge flow.
- Actors from other departments do not want to participate.

*Comparison*

	SOLUTION #1	SOLUTION #2	SOLUTION # 3
HUMAN RESOURCES	HIGH	HIGH	HIGH
TIME	MEDIUM	MEDIUM	MEDIUM
COST	HIGH	LOW	LOW
LONG TERM USE	HIGH	HIGH	MEDIUM
VIABILITY	MEDIUM	LOW	HIGH

Scale:

## HIGH:

Human Resources: More than 30 people

Time: More than 1 year

Cost: Over \$100,000 MXN

Long Term Use: Utility of the solution will last more than 5 years

Viability: There is a high opportunity of implementation

## MEDIUM:

Human Resources: From 15 to 30 people

Time: Between 5 months and 11 months

Cost: Between \$50,000 MXN and \$99,999 MXN

Long Term Use: Utility of the solution is between 1 year and 5 years.

Viability: Implementation can be hindered by administrative measures or people.

## LOW:

Human Resources: Less than 15

Time: Between 0 months and 5 months

Cost: Less than \$50,000 MXN

Long Term Use: Utility of the solution less than one year

Viability: There is a small possibility of implementation

I choose Solution 1, because my aim is to create a knowledge transfer culture between sourcers and buyers and by using this model it is possible to start the understanding of Knowledge transfer importance.

It is the most useful in long term because it would improve the relationship between buyers and sourcers. Plus every solution for their problems would be documented, therefore when current buyers and sourcers are gone, there would be a manual for future buyers and sourcers in order to give them already solutions for common problems between both areas (Purchasing of Commodities and Global Sourcing)

The proposed model gives the focus on savings and not in turnovers. This will concentrate most of the time and resourcers in the GSP that generate higher savings.

Also the time is feasible, and through the workshops would be encouraged communication and cooperation between them.

Even though it has the higher cost and high human resources, it has a high long term use and medium viability. The expected results are to close in less time the GSP, make a tighter relationship between buyers and sourcers and turn sourcers and buyers tacit knowledge into explicit knowledge. By doing so all that knowledge for solving problems will stay in VW.