

CASE STUDY:

Nike Uses Knowledge Transfer to Manage Change and Increase Innovation in Offshore Teams (2012)

Introduction: The Footwear Division of Nike—a Fortune 500 global manufacturer and marketer of athletic wear and equipment—was seeking to shift certain lower-level tasks related to product development from one job role and location to another, freeing up key positions to work on more complex, next-generation products. Nike had already spent two years trying to transfer these tasks, as part of a project called Shared Product Creation.



 *We are trying to make a seismic shift in what we've got Developers focused on.* — DIRECTOR OF FOOTWEAR PRODUCT DEVELOPMENT OPERATIONS

I. THE BUSINESS PROBLEM

1. Nike's Footwear Developers working in their Asian Nike Liaison Offices (NLOs) needed to take on more innovative projects to speed product development. These Developers, not having been required to innovate much in the past, needed to be "taught" how to **take on more high-innovation projects**.
2. Taking on higher innovation/more complex projects would require NLO Developers to work in a different capacity than in the past, but these **new job role expectations were unclear**. It was also unclear whether or not all of the current NLO Developers had the capability to perform in the new role. The role needed better definition and the path to success needed to be measurable to reduce the risk of failure.
3. Less complex tasks of NLOs needed to be shifted to job roles in the Product Creation Centers (PCCs) at Nike supplier factories. The PCCs needed to **be measurably ready to perform new skills** or the risk of failure was also high. PCC personnel did not yet know how to do the less complex tasks of the NLOs, and new factories and PCC personnel were simultaneously coming on line, putting increased pressure on training, onboarding, and knowledge transfer.
4. The concept of questioning instructions received from U.S.-based Designers and Developers—such as "pushing back" on impractical or difficult to manufacture product designs—was culturally unfamiliar to PCC personnel. This need to **address cultural differences within offshore teams** added a layer of complexity to the challenge of training the factory developers.
5. Management **needed a proven framework** for identifying the skills that needed to be transferred, forecasting when the transfer should be completed, and testing that knowledge actually had transferred between the NLO and PCC personnel. In the absence of such a framework, there was no measurable way to determine when PCC personnel were trained and ready, so NLO personnel could take on new responsibilities.



“ *A lot of the NLO developers were focused more on project management and creating data as opposed to the craft of developing and creating footwear.We needed our Developers doing higher level skills.*” —

FOOTWEAR DEVELOPMENT DIRECTOR FOR NORTH AMERICAN PRODUCTION CREATION, ON THE PROBLEM TO BE SOLVED

In 2012, Nike’s Global Director of Footwear Development—knowing that formal classroom training alone would be insufficient to transfer the needed job skills and manage the cultural change—brought in The Steve Trautman Co. to address these problems with their on-the-job knowledge transfer solution.

II. STRATEGY

Use The Steve Trautman Co.’s proven 3-step Knowledge Transfer Solution to clarify what specific knowledge and skills need to be transferred to whom in supplier Product Creation Centers, by whom among the designer-to-factory liaisons (NLOs), and in what priority order to implement the new vision for innovation. And, to provide the accountability structure to know *when* the transfer of less complex tasks to the factories was complete and had been absorbed, so the NLOs could be expected to take on their new responsibilities.

III. APPLICATION: THE STC 3-STEP KNOWLEDGE TRANSFER SOLUTION

STEP 1: Nike management used The Steve Trautman Co.’s (STC) workforce risk assessment tool, the **Knowledge Silo Matrix (KSM)**, as the framework through which to: A) define and prioritize the key knowledge areas (silos) that needed to be transferred from NLO personnel to PCC personnel in four regions [Indonesia, Korea, South China/Guangzhou, and Taiwan]; B) clarify which subject matter experts (mentors) would be the standard bearers who taught assigned apprentices in the PCCs; and C) reveal where Nike’s greatest talent risks lie.

- Management identified five key job responsibilities at the NLOs, namely Chemical Engineering, Product Development, Costing, Engineering, and Materials. Every NLO and PCC employee in these five silos was then rated by level of expertise. **[See Figure 1 and Key]**
- With The Steve Trautman Co.’s guidance and Q&A process, Nike management then chose from among its NLO staff two subject matter experts for each knowledge silo who represented “the right way to do things” (a lead silo mentor and a back-up who was consistent in approach with the lead mentor). Choosing a standard bearer for each silo clarified who was the best person to set the standard for factory apprentices, specifying the lower-level skills they needed to assume. It also ensured consistency among offshore teams and across similar job roles.
- Compare to Figure 3 in “Results.” (Some names and terms have been changed to protect client confidentiality.)
- STC pushed Nike to answer a key question that had been muddying new job role expectations and hindering their 2-year attempt to transfer skills: Did Nike want one expert (KSM color code purple) in each knowledge silo per country? Per region? For the world? Once Nike realized its lack of clarity on this expectation and answered the question (“One standard for the world.”), then management was able to give clear directives to NLOs and PCCs for all regions and work toward consistency.



- Nike management also used the KSM to identify NLO and PCC employees who were potential future mentors.

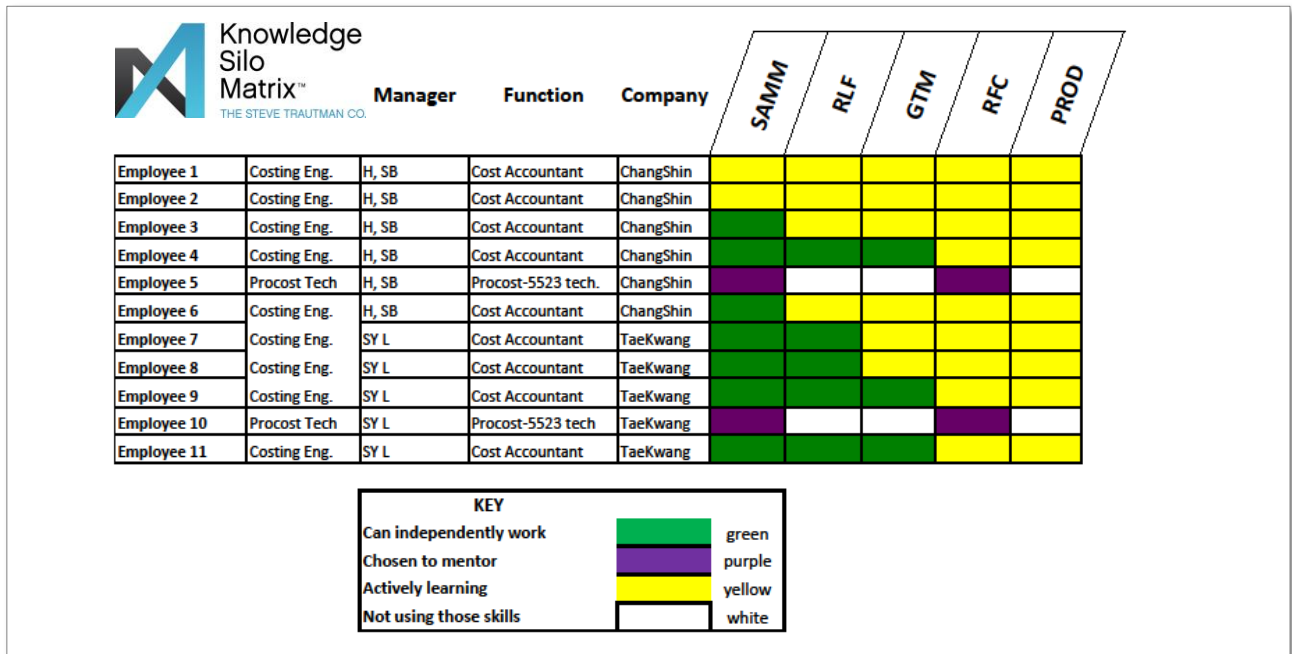


Figure 1: Example of Nike’s Knowledge Silo Matrix (KSM) for the Costing Silo for the Korean PCC team.

STEP 2: Nike then wrote **Skill Development Plans (SDPs)** for each of the five knowledge silos and set the start of the ‘Holiday 13’ season in October 2012 as the deadline when PCC personnel should be ‘green’, meaning performing skills successfully and independent of Nike oversight. Through the SDPs, apprentices in the PCCs could now identify which specific skills they needed to learn and by when—along with the resources available to support this learning. This enabled apprentices to take greater ownership of their training. Mentors could see clear priorities for *what* to teach first to *whom*, and which knowledge tests to apply to check their apprentices’ learning. [See “test questions” below] And, regional managers could predict when the knowledge transfer for a silo should be complete, track progress and see where they were ahead or falling behind, and provide accountability for risk reduction. [see Figure 2]

- For the past 10 – 12 years, Nike had used competency models to guide their talent management, identifying six core competencies they wanted in Developers (e.g. Project Management, Interpersonal Skills, etc.). But, their competency model provided no additional layer of specificity to guide job role definition and training now that Nike’s business model had changed. The Steve Trautman Co.’s methodology—specifically the SDP—allowed Nike to see this needed layer of detail they were missing and to systematically drill down to achieve it.

“What really stood us on our ear and made us see things differently was the very notion of: ‘What do these key competencies mean, really? If I was to dig down—can you tell me, for example, what it really means to be an effective project manager? What do you need to be able to do?’ We had these big notions [competency models], but we didn’t have a lot of substance under them. So that was a big a-ha.” — DIRECTOR OF FOOTWEAR PRODUCT DEVELOPMENT OPERATIONS



- STC worked with Nike’s chosen experts to create master SDPs for each knowledge silo. These plans broke the silos down into individual skills needed to be able to work independently in that silo. (A skill is defined as something someone can say “go do” and can be learned by a capable apprentice in about 1 – 2 hours.) Each region used the same set of master SDPs to ensure global consistency.
- SDPs included not only hard skills (e.g. knowing the steps of a standard process) but also the “soft” skills valued by Nike management. This was especially important for introducing higher innovation tasks into the expanded NLO Developer role and teaching PCC personnel to ‘push back’ on impractical or difficult to manufacture product designs submitted by US-based Designers and Developers.
- To provide a knowledge transfer metric, silo mentors were guided by STC consultants to specify a number of knowledge transfer “test questions” that an apprentice should be able to answer verbally to prove they had absorbed the mentor’s teaching. For each skill, 3 – 5 test questions were chosen from an established set of 20 that The Steve Trautman Co. has honed over the decades and are adept at checking for not only the practical but also the tacit knowledge needed to perform a job skill. (Ex. “*What are the relevant historical issues to consider for ___?*” “*How do you recognize ‘quality’ work for ___?*” “*How do you escalate a problem or crisis in this area?*”) Mentors were encouraged to choose test questions that checked for attributes that aligned with project goals (e.g. Innovation).
- Once master SDPs were complete, each PCC apprentice was given their own customized Skill Development Plan. The skills were ordered in terms of priority and a target date was affixed by which the learning should be complete.
- Customized SDPs also listed resources available to the apprentice to help drive their own learning (e.g. online documentation or Help wikis).

Skill "Do Statement"	Sequence	Test Questions	Due Date	Resources
Develop Nike Global Engineering Standards	1	<ol style="list-style-type: none"> 1. Explain the Nike Process Standards Requirements? 2. Explain how to use MANFRED? 3. Where to locate PCM Engineering Folder? 	6/4-6/8	<ol style="list-style-type: none"> 1. Irini D. 2. PCC-JG Kim <ul style="list-style-type: none"> * Link: http://gpe.nike.com/eng/default.aspx#(Product Eng - B/P) * Install MANFRED / PCM * Insert MANFRED training document
Review Tech Package and identify issues	2	<ol style="list-style-type: none"> 1. How to access PCM and to post the file? 2. How to create a project file? 3. Who are the relevant counterparts to communicate with? 4. Explain standard digital model file format. 5. Where to find the category B/P? 	6/18-6/22	<ol style="list-style-type: none"> 1. Irini Dimitriou 2. PCC-KH Jeon <ul style="list-style-type: none"> * Insert Project File Template * Install Adobe Acrobat * PCM Access * Share how to create a project file documentation * Upper pattern and tooling naming format * Product exception process * Key Manufacturing Process * Test Lab and wear Test fit report
Review pattern construction and identify engineering potential issues.	3	<ol style="list-style-type: none"> 1. Show how to check the last draft? 2. Locate category standard shell pattern? 3. How to check the lasted upper? 4. How do you prepare the VSM and relevant process mapping? 5. How do you address upper issues like wrinkles, loose fitting, last center points and x-ray? 6. How many main lasting construction we currently have? Which construction fits your project development? 	7/16-7/20	<ol style="list-style-type: none"> 1. Irini D. 2. PCC-SG Kim (Running PE leader)
Identify basic upper related issues and provide solutions.	4	<ol style="list-style-type: none"> 1. How and where to locate Category Best Practice? 2. How would you communicate to the relevant people? 3. How would you check with the relevant functions including costing concerns? 4. Show how to use the snapshot function for the project file? 	7/23-7/27	<ol style="list-style-type: none"> 1. Irini D. 2. PCC-MS Kim <ul style="list-style-type: none"> * Link: http://gpe.nike.com/eng/default.aspx#(Product Eng - B/P)
Improve pattern efficiency and Considered score.	5	<ol style="list-style-type: none"> 1. How to target Considered Index? 2. How would efficiencies / EPM / Chemical / Process affect Considered Score? 3. How to achieve the model Considered Rating? 4. How to check / ensure PCC accuracy? 	7/30-8/3	<ol style="list-style-type: none"> 1. Irini D. u - KS Kim - AeRan Kim 2. PCC-KH Jeon <ul style="list-style-type: none"> * Link - Considered Index * Insert Considered Index Template / Example File <ol style="list-style-type: none"> 1. Irini Dimitriou

Figure 2. Example of a Nike Skill Development Plan (SDP), a tool of STC 3-step knowledge transfer. This is a portion of a customized SDP for the Product Engineer SMMM knowledge silo in Korea. (Some data has been changed to protect the client’s confidentiality.)



STEP 3: The Steve Trautman Co. consultants then led Nike experts, apprentices, and managers in a 2-day **Knowledge Transfer Workshop (KTW)** that taught 15 proven techniques for quick and clear knowledge transfer on-the-job. Using KTW techniques, mentors did not have to be naturally gifted teachers or “people persons” to succeed. The techniques showed the mentor how to prioritize and conduct on-the-job training sessions during the course of their regular work day.



- Guided by the KTW’s “how-to” principles, mentors and apprentices began holding regular, on-the-job knowledge transfer sessions.
- Knowledge transfer process owners required weekly status updates to ensure accountability to Skill Development Plans deliverables.
- STC consultants and Nike management conferred with the knowledge transfer process owners in each region monthly to review status reports, discuss and resolve problems encountered during the knowledge transfer, and drive to project completion.

IV. RESULTS

1. The measurable, consistent framework is in place and fully in use in four regions.

“The value for us is that there is a methodology and a way to move forward. And, it’s a relatively simple process that you can understand and follow to get to where you need to be.... [Without the STC process] we might have gotten there on our own—it just would have been slow and it would have been painful.” —DIRECTOR OF FOOTWEAR PRODUCT DEVELOPMENT OPERATIONS

“I think this is a great, systematic approach to identify weaknesses and drive competencies that are lacking within an organization. It is a good framework...a program that I like and would definitely recommend.” — FOOTWEAR DEVELOPMENT DIRECTOR FOR NORTH AMERICAN PRODUCTION CREATION

2. Within two business quarters, PCCs have grown priority skill sets and are measurably ready to take on their new responsibilities*:

Total Product Creation Centers	16
Total PCC Apprentices (“yellow”)	369 employees (at start w/o needed skills)
Timeframe	Six Months 4/1/2012 – 10/10/12 (completion deadline was start of Holiday 13 season)
Now Working Independently or Mentoring After 2 Quarters of KT (“green”/“purple”)	340 employees (measurably ready; met Nike standard)
Still Apprenticing (still “yellow”)	29 employees (not yet met Nike standard)



Knowledge Silo Matrix™
THE STEVE TRAUTMAN CO.

Name	Title	Manager	Function	Company	SAMM	RLF	GTM	RFC	PROD
Employee 1	Costing Eng.	H, SB	Cost Accountant	ChangShin	Green	Green	Green	Green	Green
Employee 2	Costing Eng.	H, SB	Cost Accountant	ChangShin	Green	Green	Green	Green	Green
Employee 3	Costing Eng.	Hg, SB	Cost Accountant	ChangShin	Green	Green	Green	Green	Green
Employee 4	Costing Eng.	H, SB	Cost Accountant	ChangShin	Green	Green	Green	Green	Green
Employee 5	Procost Tech	H, SB	Procost-5523 tech.	ChangShin	Green	Green	Green	Green	Green
Employee 6	Costing Eng.	H, SB	Cost Accountant	ChangShin	Green	Green	Green	Green	Green
Employee 7	Costing Eng.	SY L	Cost Accountant	TaeKwang	Green	Green	Green	Green	Green
Employee 8	Costing Eng.	SY L	Cost Accountant	TaeKwang	Green	Green	Green	Green	Green
Employee 9	Costing Eng.	SY L	Cost Accountant	TaeKwang	Green	Green	Green	Green	Green
Employee 10	Procost Tech	SY L	Procost-5523 tech	TaeKwang	Green	Green	Green	Green	Green
Employee 11	Costing Eng.	SY L	Cost Accountant	TaeKwang	Green	Green	Green	Green	Green

Figure 3. An example of an updated Knowledge Silo Matrix (KSM) for the Costing silo for the Korean PCC team. Compare to Figure 1 above. (Some names and terms have been changed to protect client confidentiality.)

- The new, more innovative role of the NLOs has been clearly defined:** Master SDPs were created for NLO Developers, setting the job role expectations and giving specificity to the skills they needed to have.

“ We have clearly identified what are the things that we want our Developers working on, whereas before we had a general but a fairly vague notion. We went from having five or six key competencies to having eleven silos of work—of what we want them doing—very, very well defined.” —DIRECTOR OF FOOTWEAR PRODUCT DEVELOPMENT OPERATIONS

- Risks have been reduced:** Nike now has critical skills that are not just possessed by the NLOs but also by the PCCs. There has been a very clear transfer of skills. And, across the four regions the skills that PCC personnel can be counted on to have are basically the same—global consistency has been achieved.
- Meeting Nike’s goals, PCC personnel are now “pushing back” more on WHQ Designers or Developers and making recommendations, e.g., catching things in a design that may add unwarranted cost or time to the manufacturing process:** Nike’s knowledge transfer process owners are reporting that factory developers in their region, after the knowledge transfer process, are now finding things in footwear designs that don’t meet best practices and are more aggressively pushing back with suggestions. Here are some representative examples:

- “When I worked in the [shoe-type] project, we suggested removing the heel cord for saving cost and efficiency.”*



“ WHQ wanted to follow everything with [shoe-type] design, but we changed flywiring process for the leather version to save cost and for higher productivity.”

- **“Suggested WHQ alternative material to reduce time of laser perforation.”**
- **“WHQ wanted to add 3 stripes on the Quarter as Quarter Overlay, but it looked like Adidas, so we asked WHQ to check legal issue and change design. (Moving 3 stripes to under the mesh as Quarter Underlay).”**
- **“We’ve driven 2-pieces pattern of Tongue to 1-piece, and then we could get better pattern efficiency and save the cost.”**
- **“WHQ suggested removing recess on the backside of outsole toe tip for better bonding, but we thought that it is useless process since Outsole toe tip is already curved after stock fitting with midsole.”**
- **“Added mudguard on medial side in order to remove wrinkle. It’s related to design, but suggested to improve quality. As a result, it’s accepted by WHQ.”**

6. Job satisfaction has increased at the PCCs and NLOs as a result of learning or transferring skills: Nike knowledge transfer process owners have reported a rise in employee job satisfaction, as seen from their status tracking. These representative comments were supplied from Korea:

“ The SDP gave me a lot of satisfaction with my job. Now I can see the big picture of my duty.”

- **“After SDP process, it made me broaden my horizons with foundation knowledge of developing process when handling projects. Of course, it increased job satisfaction and more understanding.”**
- **“It was really helpful to understand whole Nike product creation process.”**

7. Long-term benefits for future onboarding: Asian workforces today have high turnover. Nike now has a way of saying to its Product Creation Centers and factories, *“Here are the skills and level of proficiency your people must have in their role in order to do work for us.”* This includes new people coming on board. In the past, Nike would end up in a cycle of onboarding and training new hires. Now, Nike is has asked the PCCs to be responsible for training their own new hires using these master SDPs and this knowledge transfer process. Nike can now get out of the retraining business—freeing up their people to do higher level work.

“ There are just so many things we got out of this [pilot] that I think will allow it to live on. And also, it will allow us to use some of this in future projects.” —DIRECTOR OF FOOTWEAR PRODUCT DEVELOPMENT OPERATIONS

Results as of 4/8/2013