The Steve Trautman Co.™
Knowledge Transfer, Quick and Clear

CASE STUDY:

A Major Insurance Company Uses 3-Step Knowledge Transfer & EKT to Replicate Critical Knowledge Siloed in Aging, Retired, or Contract Individuals (2013)

Introduction: A Fortune 1000 insurance and financial services company (the "client company") has an Information Systems (IS) division whose workforce is spread between the Northeastern U.S. and Canada. The IS division includes a mix of developers and analysts, both contract and fulltime employees. It is a very experienced, "graying" workforce and certain business-critical knowledge and skills—such as maintaining vital legacy systems—are held by single individuals.

I. THE BUSINESS PROBLEM

1. The client company **needed to reduce its reliance on individuals with unique critical knowledge and quickly train and cross-train peers and back-ups.** The company was at high risk of losing experienced employees, due to:

   - A change in retirement packages that would cause many to retire around the same time;
   - A substantial number of anticipated retirements in the next 2 – 7 years; and
   - The possibility of sudden absences (e.g. long-term illness, death), resignations, or departures for any reason.

2. **Too much business-critical knowledge was siloed in outside contractors,** including at times in a single outside professional. As management prepared to review the role of contractors in the organization's future, the client company needed to maintain an appropriate level of internal knowledge and reduce its reliance on these individual contractors.

3. In response to these immediate pressures, the organization **needed a methodology for quick knowledge transfer.** It was not possible to add headcount to develop bench strength, so the organization needed to work with existing employees to quickly absorb the knowledge of current experts and prepare others to take over or become backups.

In 2013, Dan Roberts, head of the IT consulting firm Ouellette & Associates partnering with the client company, understood the challenges faced. Roberts brought in the knowledge transfer experts at The Steve Trautman Co. (STC) to offer a solution: a structured, 3-step knowledge transfer (KT) process that was quick and measurable. The client company hired STC and launched pilots for proof-of-concept.

> ***"We knew we had risk at several points of failure—in other words, we had quite a bit of information within the organization that was only with one person. Some of the main things we wanted to address in the pilots were to identify those single points of failure and to mitigate the risk through the Steve Trautman process."*** —Systems Director for the Client Company

> ***"We have transferred knowledge successfully in the past—if we had a long time to do it. What I was looking for was a methodology that everybody followed consistently. So I wanted a knowledge transfer process that was repeatable and had some consistency in the level of training. We wanted structure to the process…and a way of making sure that the knowledge transfer was successful."*** —Asst. V.P. of IT and the Pilots' Executive Sponsor

PILOTS LAUNCHED IN EARLY 2013:

Tax Server — Tax Server denotes a legacy system of the client company. Critical knowledge needed to run and maintain the system was siloed in an already-retired employee, "Jane," and in a single long-standing contractor, "John." Retired employee Jane has been retired for more than a year and was working 15 hours a week for the company as a consultant. And, while management did not have any immediate plans to stop using contractors like John, management's long term goal was that IT teams be more independent so that the organization didn't necessarily need to retain contractors like John for as many hours per year. This pilot's goal was to quickly, measurably transfer these two experts' critical knowledge to a number of fulltime employees designated as apprentices.

Mini-Groups — A lone, deeply-experienced IT professional, "Sam," maintained a crucial legacy system responsible for connecting customers' credit card payments to banking systems, enabling the payment of company premiums. "Sam" was highly talented but not a natural teacher and, like many professionals, needed a KT process that was not dependent on the mentor's degree of social skills. The pilot goal was to teach "Sam" how to categorize, prioritize, and mentor his critical knowledge to peers and back-ups who would ensure needed bench strength.

Emergency Knowledge Transfer (EKT) — An IT systems expert, "Jack," was retiring from the IS division in two months. Management wanted to use his last weeks on the job wisely. This pilot's goal was to identify and quickly transfer his most important unique knowledge and skills to a main back up and a team of 3 – 5 others to reduce talent risk, improve bench strength, and increase collaboration. This pilot optimized STC's standard 3-step KT process for speed, using a condensed process called "EKT."

II. STRATEGY

Use The Steve Trautman Co.'s proven **3-step Knowledge Transfer Solution** to **1: Assess Risk** via a structured framework that allows management to not only pinpoint where its greatest talent risks lie but also use later to track where knowledge risks have been mitigated and bench strength has been achieved. **2: Create the KT Plan** by clarifying what specific knowledge and skills need to be transferred in what priority order to which younger, fulltime employees. **3: Learn How to Act on the KT Plan** by giving the client company's mentors and apprentices the know-how and tools to quickly transfer and receive knowledge, along with a structured assessment to test that the transfer successfully occurred.

For the EKT pilot specifically: Use an abbreviated version of the 3-step process that is maximized for speed, by moving directly into Step 2—identifying, prioritizing, and scheduling the transfer of the expert's most critical knowledge and skills—and by shortening Step 3's two-day group workshop into an individual tutorial between the retiring expert, "Jack," and a STC consultant who would teach the mentoring skills and techniques that Jack needed most.

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

STEP 1: The client company used The Steve Trautman Co.'s (STC) talent risk assessment tool, the **Knowledge Silo Matrix (KSM),** to identify the knowledge areas ("silos") of a given team and where gaps lie in needed employee skills and bench strength. Then they prioritized these gaps in terms of greatest workforce risk and identified on-the-job mentors and apprentices in each high risk silo.

- Company management, designated experts, and STC consultants together identified 34 knowledge silos for the Tax Server team **[see Figure 1]**, 2 silos for the Mini-Groups team, and 5 silos for the EKT pilot.

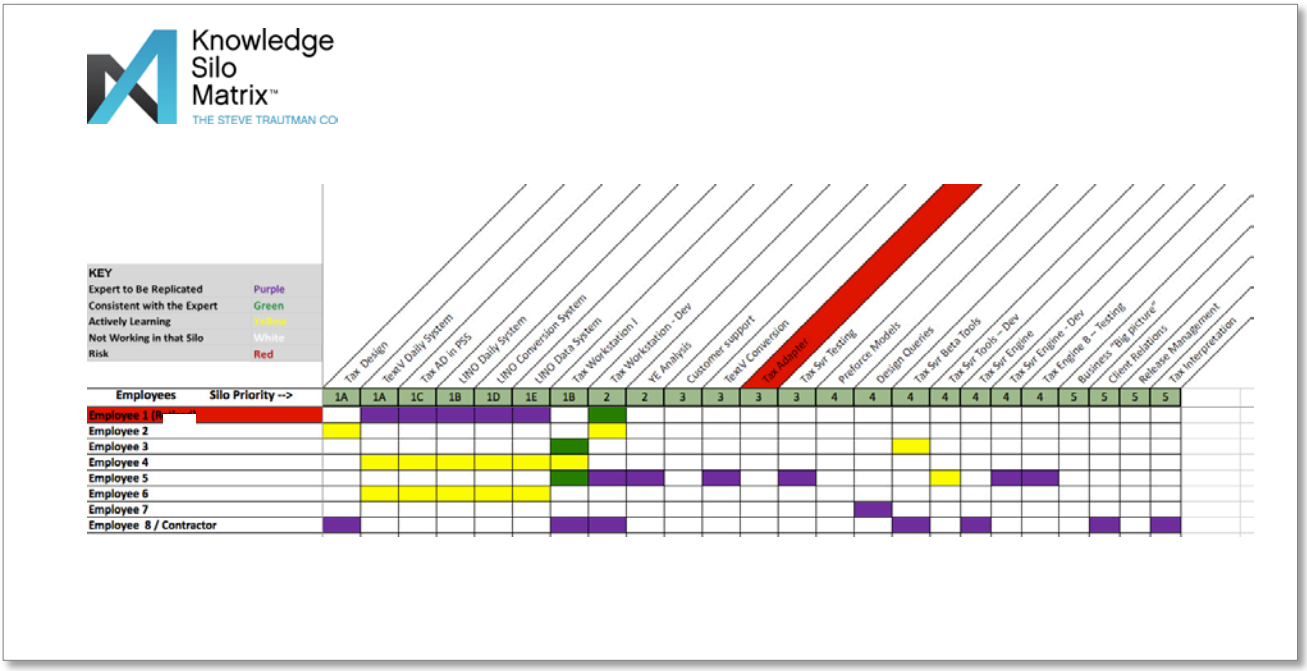


Figure 1. A partial image of a Knowledge Silo Matrix (KSM), a tool of 3-step knowledge transfer. This anonymized KSM for the client company's Tax Server pilot reveals that team's greatest talent risks (red) at a glance. For example, critical knowledge is exclusively siloed in an already-retired employee (Employee 1) and one knowledge silo has no available expert at all (Tax Adapter). Critical unique knowledge is also siloed in an individual contractor (Employee 8), which is an additional risk, although here deemed a lesser priority by management.*

- Each pilot team member was then rated in each knowledge silo according to their skill level—"apprentices" (coded yellow), workers "consistent with the expert" and able to work independently (coded green), the expert setting the standard who would "mentor" if required (coded purple), and those not working in that knowledge silo (coded white). Employees were rated via a quick process that combined management discussion, the expert's assessment, and, when needed, employee peer interviews.

- With silos and ratings in place, the KSM immediately revealed to management where imminent knowledge loss and bench strength risks lie (coded red in Figure 1). Management then prioritized these risks in relation to their business goals.

> ***"What I liked about the Trautman approach is that there is a definable process. First, you identify all of your silos—the basic topic areas where there is knowledge. Then, the thing I liked is that you basically wrote down on a spreadsheet every team member and across the columns of the spreadsheet were the silos, and you got to rate each person on whether or not they had any proficiency in a particular area and whether you wanted them to have proficiency in a particular area. It was a way on one page to get a sense of where your risks were and be able to prioritize those risks."*** —CONTRACTED CONSULTANT AND A MENTOR FOR THE TAX SERVER PILOT

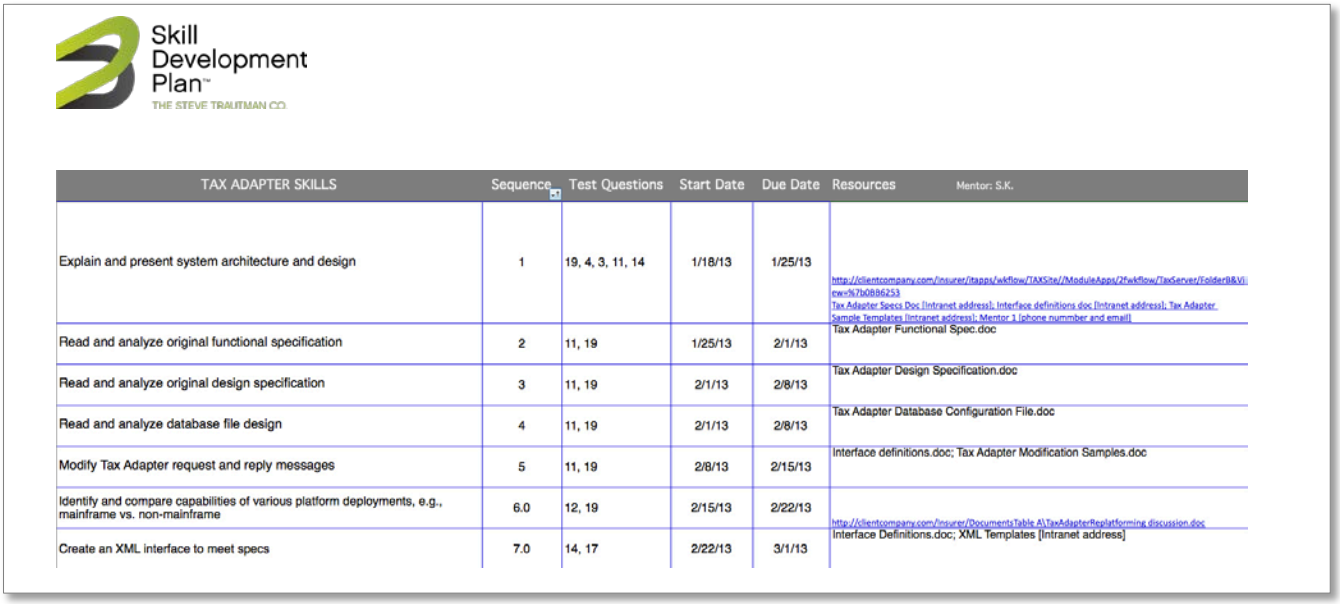
EKT Pilot Variation: As noted above, this pilot skipped completing a KSM in the interest of time and because the risk (retirement of the expert Jack) was already clearly defined.

STEP 2: The client company then wrote date-driven **Skill Development Plans (SDPs)** for each at-risk silo of the pilots.

- A master Skill Development Plan (SDP) was written per knowledge silo, which broke out the individual skills required to do work in that silo. (A skill is defined as something someone can say "go do" and can be explained to an apprentice in about an hour.) The master SDP also listed resources available to the apprentice (e.g. the mentor for each skill, online documentation, samples, wikis, etc.).

> ***"One value I found was having a trained facilitator in the room to help experts come up with the list of skills, the master SDP. It helps you to think outside the box. … Another value [of the STC process] was that the [KT] training sessions are limited to one hour blocks. I think that that helped to get the knowledge transfer done, because everything in the plan was broken down into manageable pieces."***
>
> —SR. SYSTEMS MANAGER AND THE MANAGER FOR THE EKT PILOT TEAM

- Next, a customized SDP was completed for each apprentice, showing which skills from the master SDP an employee needed to learn. **[see Figure 2]** Customized SDPs were ordered in terms of risk mitigation priority and a date was affixed by which the apprentice should have each skill learned.



Skill Development Plan™
THE STEVE TRAUTMAN CO.

TAX ADAPTER SKILLS	Sequence	Test Questions	Start Date	Due Date	Resources Mentor: S.K.
Explain and present system architecture and design	1	19, 4, 3, 11, 14	1/18/13	1/25/13	http://clientcompany.com/insurer/itapps/wkflow/TAXSite//ModuleApps/2fwkflow/TaxServer/Folder8&Vi ew=%7b0B86253 Tax Adapter Specs Doc [Intranet address]; Interface definitions doc [Intranet address]; Tax Adapter Sample Templates [Intranet address]; Mentor 1 [phone nummber and email]
Read and analyze original functional specification	2	11, 19	1/25/13	2/1/13	Tax Adapter Functional Spec.doc
Read and analyze original design specification	3	11, 19	2/1/13	2/8/13	Tax Adapter Design Specification.doc
Read and analyze database file design	4	11, 19	2/1/13	2/8/13	Tax Adapter Database Configuration File.doc
Modify Tax Adapter request and reply messages	5	11, 19	2/8/13	2/15/13	Interface definitions.doc; Tax Adapter Modification Samples.doc
Identify and compare capabilities of various platform deployments, e.g., mainframe vs. non-mainframe	6.0	12, 19	2/15/13	2/22/13	http://clientcompany.com/insurer/DocumentsTable A\TaxAdapterReplatforming discussion.doc
Create an XML interface to meet specs	7.0	14, 17	2/22/13	3/1/13	Interface Definitions.doc; XML Templates [Intranet address]

Figure 2. A partial image of a Skill Development Plan (SDP), a tool of 3-step knowledge transfer. This is a customized SDP for an apprentice of the Tax Adapter silo of the client company's Tax Server team.**

> ***"What's different to me about this process is that it says: focus on what you have to deliver, as opposed to what you might need to know. In other words, it's 'I need to know how to do this'—then you go and learn how to do that. It's not just a collection of a lot of information—'Ok, go read all these things'—but then what have you learned how to do?"***
>
> SYSTEMS MANAGER AND THE MANAGER FOR THE MINI-GROUPS PILOT

- "Test questions" were assigned for each SDP skill to confirm that the right knowledge had been effectively transferred. These test questions are quick, verbal assessments that reveal the wisdom and tacit knowledge needed to use a skill on the job (e.g. *"What is the relationship between x and y?" "How do you troubleshoot the three most common problems?"*). The mentor chooses which test questions to apply from a set of 20 that STC has refined over decades. The test questions are one of STC's valuable contributions to knowledge transfer—they give the process teeth via a metric for whether critical knowledge *has* transferred and been absorbed by the apprentice.

- Through the SDP tool, apprentices could see their skill gaps and drive their own learning, mentors could see clear priorities for what to teach to whom and which knowledge tests to apply, and managers could track skill level status to provide accountability for reducing risks.

- *EKT Pilot Variation:* In the case of EKT, to optimize the process for speed, customized SDPs were skipped and instead each apprentice was given the same master SDP spreadsheet and asked to choose from the list of 20 test questions the 4 or 5 they most needed to know per skill. This approach focused the apprentices on the most critical learning to be absorbed in each KT mentoring session and allowed the mentor to better prepare. Due to the very tight timeframe, these questions would be discussed in the latter part of the mentor's KT sessions, which all apprentices attended together.

> ***"Steve Trautman Co. had worked with our mentor to come up with a breakdown for the sessions. Then they had asked us to list [test] questions that we had for the mentor on each of the different tasks [SDP skills]. The questions did help us, because the KT sessions started with a presentation from the mentor but then very quickly become discussion and that was very helpful. So—as opposed to being one-sided, take it all in, 'Thank you very much,' and everyone leaves the room—the mentor would walk us through a skill end-to-end, not by handing us some piece of paper but drawing it out on a whiteboard in a way that was more interactive. That was very helpful."***
>
> —SYSTEMS DESIGNER AND AN EKT PILOT APPRENTICE

STEP 3: The Steve Trautman Co. then led a **Knowledge Transfer Workshop (KTW)** that taught mentors, apprentices, and their managers (if available) 15 proven techniques for quick knowledge transfer on-the-job (e.g. how to teach to different learning styles). Using the KTW techniques, mentors and apprentices did not need to be naturally gifted teachers or "people persons" to succeed. And most important, the techniques showed the mentor how to prioritize and conduct on-the-job training sessions while the mentor maintained a regular workload.

> ***"The Knowledge Transfer Workshop (KTW) was very useful. It was very good. I did bring into play [in KT sessions] tools that we were taught in the workshop. I used the 5-Minute Meeting Planner… and the workshop had given us training on how to engage, to ask questions, and to assess—I used a lot of that."*** —SYSTEMS MANAGER AND MENTOR FOR THE MINI-GROUPS PILOT

- In some mentor-to-apprentice cases, the two were located in different geographic areas (e.g. the Tax Server mentor was in the Northeast U.S. and his apprentice was in Canada).

With the 3-step process, this was not factor in the mentor's ability to impart his or her knowledge.

After attending the KTW, mentors and apprentices began scheduling and conducting their 1-hour knowledge transfer sessions, and the pilot teams' managers and KT process owners drove toward pilot completion by requiring regular status updates and accountability to the plan.

EKT Pilot Variation: Because there was no time for the retiring mentor, Jack, to attend the two-day workshop, instead the STC consultant gave the mentor a condensed version of the KTW training that was customized to Jack's immediate needs. This tutorial taught the mentor how to breakdown his knowledge into teachable chunks, plan a meeting agenda with the 5-Minute Meeting Planner, and run mentoring sessions in an interactive way. STC's one-to-group mentoring approach (as opposed to one-to-one) was used for efficiency. Each of the mentors' KT sessions, which in practice ran about 1 hour (1.5 hours max), was attended by about 4 or 5 apprentices. This worked well—as the mentor stuck to the agenda laid out with the help of the STC consultant and taught in response to the chosen test questions.

> ***"The 5-Minute Meeting Planner—I think that was useful, too, from the mentor perspective. Because then the onus wasn't on him to come up with what a session should cover. Meaning, if he found that he had run out of time during the week and hadn't prepared for that day's [KT] session, it wasn't like he had to cancel the meeting. He could still do it. The apprentices would say what they want to learn [the test questions] and the mentor would do his best to cover it. So that helped keep the meetings and the pilot on track."*** —SR. SYSTEMS MANAGER AND THE MANAGER FOR THE EKT PILOT TEAM

IV. RESULTS

1. **STC's measureable framework for knowledge transfer is in place and was fully used by the pilot teams, with observable progress made each month.** Common language and concepts have been adopted by all pilot members, and though there are some process variations, the client company achieved a consistent knowledge transfer approach, toolset, and level of training.

> ***"At least now everybody has a notion of the same process we can follow to impart some knowledge to other team members. If everybody does it the same way, it's measurable in that we can tell what we've done and what we have yet to do in terms of training."***
> —CONTRACTED CONSULTANT AND A MENTOR FOR THE TAX SERVER PILOT

2. **Employees grew skill sets and knowledge loss risks were reduced.** Pilot participants unanimously reported their pilot was a success and the process was valuable. Results came quickly: in Q1 2013, participants learned over **50 skills,** and **4 moved status** from "apprentice" (yellow) to being able to work independently (green). Reports showed that by the end of Q2 2013, **60 skills** would be gained, mitigating the risk across **all** critical silos for the pilots. **[See Figure 3.]****

   Another important risk reduction was dramatically illustrated in the Tax Server pilot. *Talent risks are not limited to older employees ready to retire.* The reality is that a stable employee can leave unexpectedly for any reason, such as employee health issues. The Tax Server pilot unexpectedly lost a manager during the pilot to a serious illness. But with the 3-step knowledge transfer process in place, the team was able to cushion and absorb the impact (from a talent perspective) of such a loss.

Result Totals for the 3 Pilot Projects	
Q1 2013 (from January start date)	**50 new skills mastered by employees**
Employees Readiness Shifts	**4 employees graduated to the next level** of ability ("green" or "purple")
Q2 2013 (June completion date)	**60 new skills on schedule to be mastered, making all employees "green" or above.** This mitigates risks across all critical knowledge silos of the teams.

Figure 3. Actual results of the client company's three pilot projects as of 4/22/2013.

3. **The client company has measurably saved on direct costs—for example, the high costs of hiring back retired experts as contractors.** In the past, the client company would typically re-hire departing experts with critical knowledge as consultants for a few days a week on repeating short-term contracts. To estimate these costs, assume a retired expert is hired back three days a week on a 3-month contract. That is 288 hours. Assume the client is paying this consultant $50 to $100 per hour (a typical range), which equals $14,400 – $28,800 in direct costs per quarter. The client had mentors in their pilots that were already working under such contracts when the pilots began. By the pilots' completion, the client was able to end these contracts. Per expert/per role, that is $14,400 – $28,800 in direct savings every quarter because the client transferred these experts' knowledge to fulltime employees and load-leveled, rather than paying the higher contract rates.

Typical Direct Costs Saved Per Exiting Expert with Critical Knowledge	
Departed Expert Hired Back as a Contractor	**288 Hours/Quarter** (est. at 3 days per week for a 3-month contract)
Contractor Hourly Rate	**$50 - $100 per hour** (est.)
Contractor Cost per Quarter	**$14,400 – $28,880**
Retained Departed Experts/Contractors from the Pilots After the Pilots' Completion	**None. The company saved an estimated $14,400 – $28,880** per quarter per departed expert.

Figure 4. Estimated direct costs saved, based on actual results from the client company's three pilot projects.

4. **The STC knowledge transfer process has been fast and efficient.** Knowledge has been quickly transferred on schedule. In the case of the EKT pilot in particular—where speed was an essential measure of success—the mentor's critical knowledge was successfully transferred in just 6 weeks, following 2 weeks of preparation.

> ***"I think it was fast. And because it was set up as a program and you have some guidelines, it also helped speed things up because you don't have to spend time thinking of how to go about doing this. That process is outlined for you. Initially, it takes time to get the framework set up, but that's a good thing."*** —SR. SYSTEMS MANAGER AND THE MANAGER FOR THE EKT PILOT TEAM

5. **Risks of errors, rework, and problem-solving time have been reduced.**

> ***"This process will reduce problem-solving time. Last year I had to deal with an assignment on something called a Config file. There was basically a typo in the Config file—and I had to scan through it and it was kind of like looking for a needle in a haystack…. But now that***

> ***"Jane" has gone through the exercise—as part of this [KT] process—and explained what a Config file is, it actually makes more sense to me what I was looking for. Versus the first time around—I wasn't sure what I was looking for because I didn't understand a Config file set up…. So the next time, if we have a similar problem, it's going to be a lot easier and quicker for me because now I'll know where to look."*** —SYSTEMS CONSULTANT AND THE APPRENTICE FOR THE TAX SERVER PILOT

6. **Pilot members are engaged and desire to see greater organizational use of the knowledge transfer process**. Many pilot employees interviewed mentioned the desire for a culture of knowledge transfer in the organization, in which critical knowledge is moved in an ongoing manner as just one of the normal processes of the company.

> ***"I was glad we did the pilot. I do think that the process can work for us going forward. I think we should continue to roll this process out throughout the rest of the organization."*** —SYSTEMS DIRECTOR, AND THE EXECUTIVE WHO MANAGES THE MANAGERS OF BOTH THE TAX SERVER AND MINI-GROUPS PILOTS

7. **Long-term benefit to legacy software systems*:*** The Mini-Groups mentor "Sam"—as a result of building the master SDP—realized that there were very few resources available (besides himself) to support apprentice learning of this legacy system. Previously, "Sam" had not documented his procedures, routines, and system troubleshooting. As a result of the pilot and his KT sessions notes, and of his own volition after seeing the need, he created Help screens and documents that now exist within the system itself to further guide and prompt apprentices and those who will use the software after him.

8. **Long-term benefit to hiring, onboarding, and preparing future mentors:** The master SDPs created in the pilots remain as skill set lists that can inform future hiring and become ready-made onboarding plans, saving time and money. This tool can also identify new hires who are lagging behind the normal learning time for a certain knowledge silo, giving early detection to potential capability problems or a bad hire. Also, today's apprentices become tomorrow's mentors. The KT process inherently prepares the future generation to one day mentor others.

> ***"I think it's a very good tool…to use for onboarding. So the idea is that when you bring one person on—have a plan, have your skills already planned out, know your knowledge silos, have all this already in place. …Is this a better plan? Yes."*** —SYSTEMS MANAGER AND THE MANAGER FOR THE MINI-GROUPS PILOT

> ***"Although I was most interested in the Steve Trautman process from a trainee perspective, I've also been here 31 years and I get to retire in 4 – 5 years as well. So I'm going to be the one asked to do this then. I'm going to have to be a mentor. So this process is very helpful to me to plan ahead, maybe write more things down, or do whatever needs to be done to facilitate that next process as well."*** —SYSTEMS DESIGNER AND AN EKT PILOT APPRENTICE

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*This case study was researched and written in March to April of 2013. Results reflect data as of 4.22.13.

**Some names and information within images have been changed to protect client confidentiality.