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VBB LeSS Case Study

Background and History

VBB - Is a large investment company, with thousands of locations and hundreds of thousands of employees around the globe. During almost 150 years of its existence, the company has gone through many phases of organizational development and restructuring. Today, it is rightfully considered, as one of the biggest and most successful financial institutions in the world.

This case study is about 2015-2016 Large Scale Scrum (LeSS) adoption experience, shared by the two agile coaches: Stuart Paterson and Gene Gendel that were hired into VBB to help with agile transformation that the company decided to undergo. Cumulatively, the coaches had experience in: organizational design, DevOps, agile training and coaching, at team and enterprise level. More specifically, Gene brought to the table his experience of working with individuals, teams and senior leadership, with focus on organizational design, system dynamics, norms, policies, practices and procedures, that he gained as a coach-consultant, serving multiple organizations over a decade. Stuart - came with rich experience of software engineering, development practices, test automation, TDD, CI/CD, as well as deep understanding of VBB's internal dynamics that he has acquired over years. From the onset of this engagement, both Gene and Stuart felt that their skills and experience were complementary and would help them achieve a common goal. The assumption by organizational leaders was that between the two hired coaches, there is sufficient skill set, domain expertise and practical hands-on experience to move the organization towards better agility.

Organizational Design and Descaling

First, let's take a look at the very high level organizational design of the company, as it existed before LeSS adoption.

The following acronyms/abbreviations will be used throughout the case study, when referring to various organizational structures:

- VBB - Very Big Bank; the whole company
- CTO domain - large organizational area, within VBB, controlled by one CTO
- CTO-Biz Partner domain - large organizational area, within VBB, controlled by a senior leader - CTO's counterpart
- TGIF - Technology Group In-Flight - organizational area within CTO Domain, where LeSS adoption was experimented

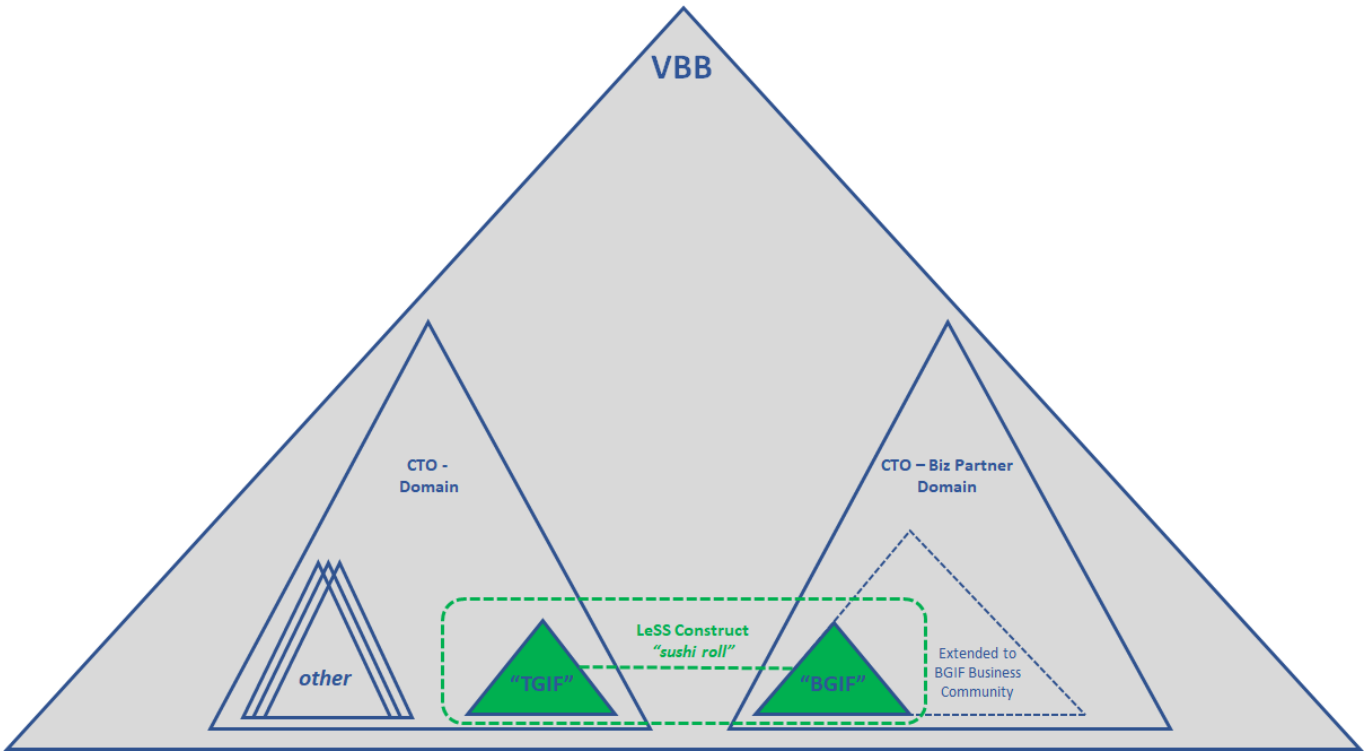
- BGIF - Business Group In-Flight - organizational area within CTO-Biz Partner Domain, also involved in LeSS adoption. There was also an extended business community (bigger than BGIF) that was not directly involved in LeSS adoption.
- LeSS Construct - people from both, TGIF and BGIF that were involved in LeSS adoption

Historically VBB - was a classic multi-layered organizational structure, with multiple reporting layers.
On technology side, there were at least 3-4 reporting layers of management, between higher decision makers (CIO/CTO) and real doers (hands-on developers).
On business side, VBB looked something similar: with multiple ‘‘translators” and “delegates”, such as BAs, PMO and various engagement managers.

The coaches belonged to the same organizational structure, spearheaded by the same CTO, but fortunately, had full access to all layers of CTO domain, as well as laterally: into CTO-Biz Partner domain.
In order to succeed with LeSS adoption, the coaches had to influence both: CTO and CTO Biz Partner domains. For that, the coaches tried to follow one of LeSS organizational design experiments: “*Try… Keep the organization as flat as possible 241 • Try… Make the organization slightly flatter than it can handle. 242*". This experiment is discussed in more detailed in the remainder of this writing.

Instead of trying to flip the whole organization at once (TGIF + BGIF), the coaches decided to do it incrementally, by first identifying LeSS “*Sushi Roll*” - a construct that would consist of people, on technology and business side (TGIF and BGIF, respectively) involved in LeSS adoption, and then gradually coach the organization towards flattening.
Why did the coaches choose an incremental approach? Neither one of the coaches believed in Big Bangs and did not want to “bite more than they could swallow”, in terms of training and coaching support. Instead of ‘peppering’ the organization with superficial changes (broad & shallow), the coaches decided to go after more fundamental/systemic changes (deep & narrow). It was also the coaches’ assessment that in order to implement the needed organizational changes, in support of new ways of working, a limited number of people would be needed (less than 50), not the entire organization.
For example, on technology side, it would mean going from vertically-stretched secluded towers, made of component teams and applications groups to flatter CTO-governed domains, made of feature teams - teams that could work by, cutting through multiple components and application layers (e.g. UI/UX, business tier, DB).

Graphically, LeSS Construct, looked like the following, inside VBB: it brought together and ring-fenced (protected), flattened organizational domains from technology and business.

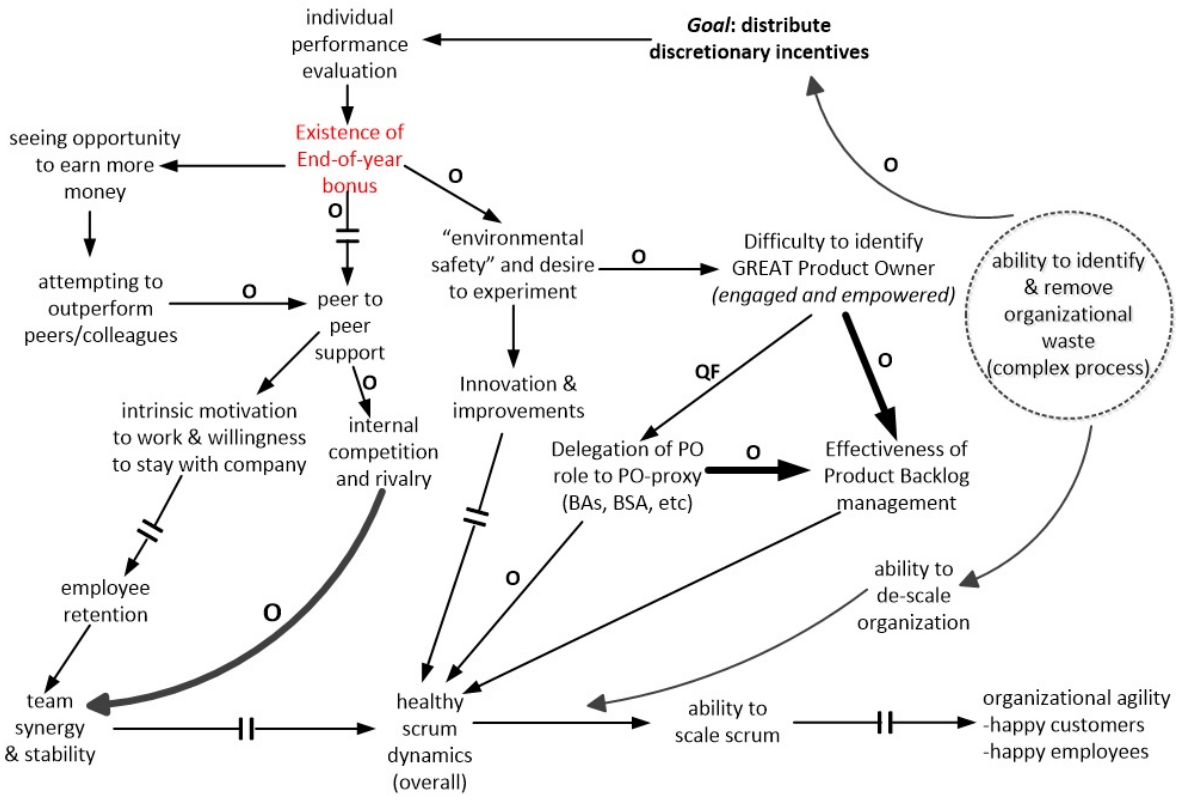


Organizational Culture

One of the most challenging aspects of organizational culture that the coaches had to face was the amount of emphasis that was put on individual performance. There was a deep systemic problem that had to be addressed, organization-wide.

Historically, VBB, had the culture that encouraged super-heroics and internal competition. People were primarily driven by extrinsic motivation and a desire to outperform their colleagues, competing for bonuses, promotions and other perks. Individual performance appraisals and end-of-year reviews defined individuals' behaviors and often led to system gaming, especially at year-end.

As an example, the below causal loop diagram describes some underlying system dynamics that involved individual performance evaluations and its impact on basic Scrum dynamics.



To alleviate the above described problem within LeSS Construct, the coaches decided to leverage the following LeSS experiment: "*Avoid… Incentives linked to performance 268", and "Try… De-emphasize incentives 270*". The goal was not to change norms and standards globally, for the whole enterprise. The goal was to educate local leadership that was influential enough to lead to changing individuals' attitude and behaviour, to make them more conducive of collective ownership and cultivation of "us- together" mentality. More about this effort below.

Adoption of LeSS

Recognizing Pre-conditions Supportive of LeSS Adoption

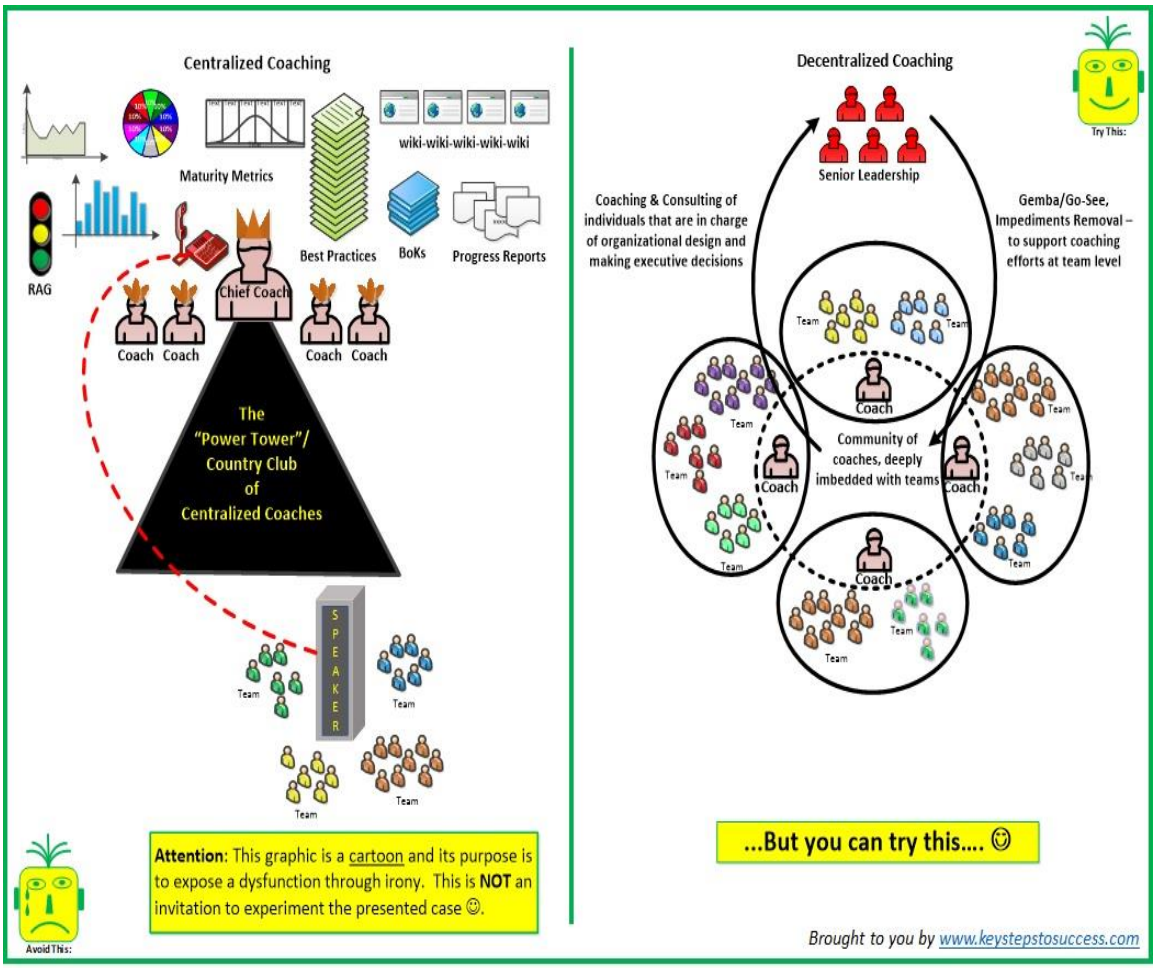
The following, were some internal preconditions within TGIF that were already supportive of LeSS guides and experiments *before* the coaches got engaged:

- PMO, as an organizational unit, was dissolved and some remaining PMO-like functions were reabsorbed by teams (e.g. scheduling, forecasting, work

assignment, progress monitoring) and business people *(LeSS experiment: "Avoid… Project Management Office 249, Avoid… So-called Agile PMO 249")*

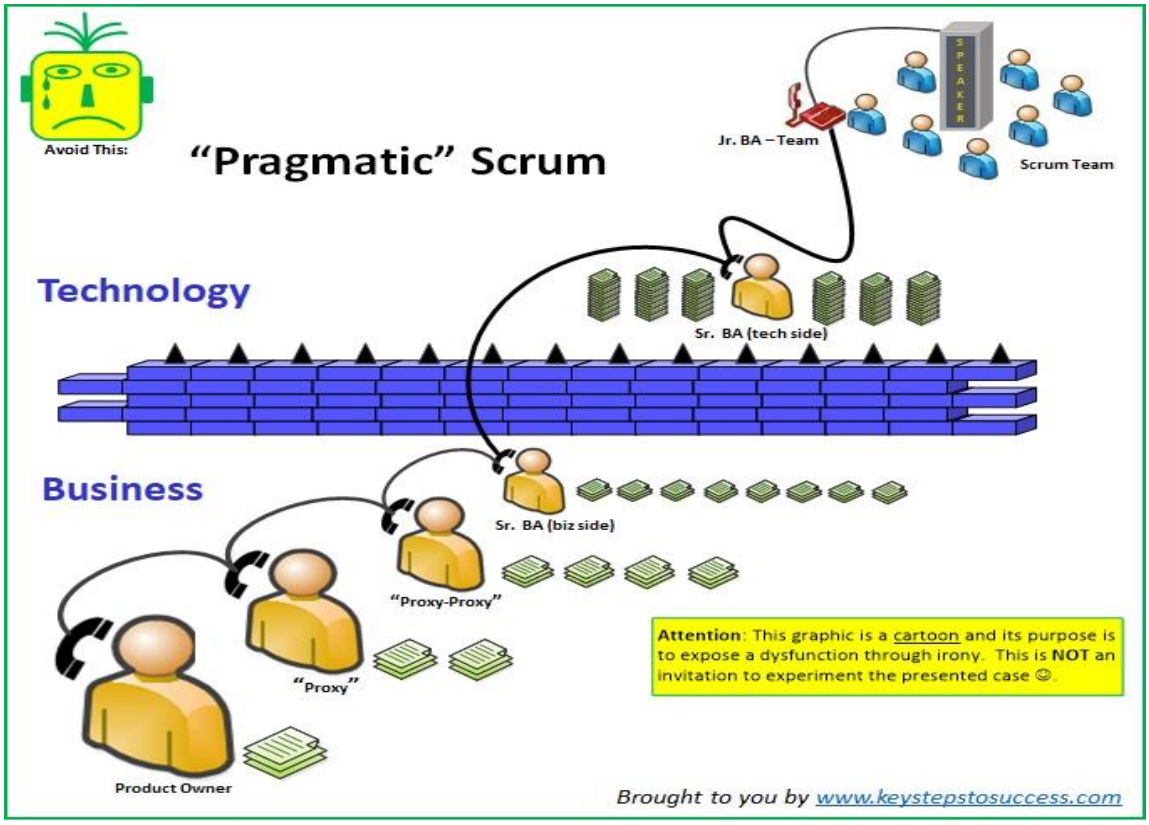
- *Already*, there was clear understanding, at all organizational levels, that having Scrum Masters doing performance appraisals on team members, would be a sign of serious dysfunction *(LeSS experiment: "Avoid… Scrum Masters do performance appraisals 275").* The organization already had a certain degree of maturity, thanks to a significant of internal people, that have received appropriate agile and Scrum training from reputable sources.
- Even with initial adoption of basic Scrum (before LeSS), teams strived to expand their respective (individual) Definition of Done, with each sprint *(LeSS experiment: "Guide: Creating the Definition of Done 231. Guide: Evolve the Definition of Done 240")*
- At TGIF, everyone clearly understood that adding 'fake' team members (e.g. project managers, “power-point architects”, PMO) to Scrum teams would not increase a team’s capacity or rate of output. Instead, it would just create an illusion of having a ‘bigger team’ *(LeSS experiment: "Avoid… Fake team members 235")*
- Senior leadership was comfortable, to be referred to as “IRS” (Impediments Removal Service), not as a “change management group” *(LeSS experiment: "Try… Impediments service rather than change management 381").* For example, a senior leader, when receiving an inquiry (call or email) from someone with a problem, would not delegate a discussion to his subordinate (middle manager), but rather offered an audience with a person who submitted an inquiry.
- Multisite planning poker (estimation poker) was *already* effectively used, by leveraging some reliable in-house built light electronic tools and video equipment *(LeSS experiment: "Try… Seeing is believing—ubiquitous cheap video technology and video culture 425. Try… Multisite planning poker (estimation poker) 429").* For example, each team had its personal common area, equipped with a video camera, speakers and a small whiteboard. This made the use of physical planning poker cards possible (was no need to mess with electronic tooling), as each team member could flash their voting card to people in the room as well as to the camera. Whiteboards were used to do quick note-taking, so that people in the room and through video camera could see information.
- Centralized (organizational) coaching departments and agile/lean cookbooks - were *already* viewed as a sign of faking/rebranding and local optimization that would eventually lead to building 'ivory towers/organizational silos of privileged coaches *(LeSS experiment: "Try… Prefer decentralization solutions over centralization ones 206. Try… Central coaching group 399. Avoid… Central coaching group with formal authority 399").* The organization saw value in deeply embedded coaches that worked closely with teams and business/product people.

People preferred deeply embedded coaches working together, as a community (image on right) over secluded power structures of ‘chiefs-coaches’ (image on left).



Learning Lessons from Adopting Basic Scrum

Prior to LeSS adoption effort, TGIF had a predominantly componentized structure. There were soft-line boundaries between the subgroups of business analysts, manual testers, developers and technical leads/managers. Requirements intake was typically done by tech-side business analysts, interfacing with biz-side business analysts, with the former then molding collected information into business requirement documents (BRDs) or similar types of *contractual documents*, and then passing documentation further along, to developers and testers. The cartoon below describes this classic challenge:



This was a classic manifestation of a waterfall process, between silo-ed subgroups of individuals, belonging to the same organization and the same technology tower. The biggest challenges with this organization design came in the form of too many handovers between subgroups, finger pointing and blame-shifting for having a lack of clarity, high volume of errors and omissions, causing long lead time/cycle time, continuous task-switching and work "aging" (due to task switching and external hold-ups).

The initial attempt to implement basic Scrum (as mentioned above, prior to LeSS adoption attempt), came in the form of restructuring teams, by bringing together individuals of complementary skill set - together. However, each team member was still I-shaped, possessing only primary functional expertise (and no secondary) and having a limited domain expertise. There was not much interest in learning new functional domains or technologies, as everyone's job title was written, as per classic HR definition of a role: 'business analyst', 'tester', 'developer', 'manager', 'architect', etc. Lack of motivation by people to learn new functional and technical skills could be easily traced to individual goal-setting and performance reviews, by first-line managers, that did not encourage anyone to expand their horizons and learn new things. Everyone's end-of-year performance and discretionary incentives (bonuses, promotions) were based on an individual's ability to prove that they delivered, and over-delivered, as per their original job descriptions (and did better than their peers/colleagues). For example, business

analysts were measured, based on how efficiently they were able to 'write stories', testers - on how many bugs they were able to discover each sprint. This also led to local optimization by single function and subsequently, to sub-optimization of the overall process. Because of that, everyone was very risk-averse and not willing to experiment anything new or innovative (e.g. slowing down their primary work and learning a new skill set, or experimenting for the benefit of a team), as it would make them being perceived as 'less efficient'.

Among many other challenges that this *mini-waterfall-intra-team design* had caused, was inaccuracy in capacity management and inability to work in the order of business priority.

Below is a graphic illustration of individual capacity management attempts that each team in TGIF group had to face almost every sprint (names and skills are substituted with fictional ones), at the beginning of their sprinting journey (they used 2-week sprint cadence).
Case 1 and Case 2 below - represent two independent attempts to account for individual level - and overall team-level capacity of one of the TGIF teams, by estimating along the dimensions of *single-function specialty* and *single-technical skill set*, respectively.

Case 1: *Impact of* ***single-functional specialty*** *of individuals on a team's capacity management:*

Team Member	Skill Set	Sprint Capacity
John	BA	60 hours
Jim	Manual QA	55 hours
Jeff	Developer	60 hours
July	Developer	50 hours
Jerry	Developer	65 hours
Josh	Developer	60 hours
Jill	Manual QA	55 hours
Total Team Capacity		405 hours

Case 2: *Impact of* ***single-technical skill set*** *of individuals on a team's capacity management:*

Team Member	Primary Skill Set Only	Sprint Capacity
Jeff	Java Front	60 hours
July	Java Back	50 hours
Jerry	SQL	65 hours
Josh	UI/UX	60 hours
Jill	Oracle	55 hours
Total Dev-only Capacity		290 hours

Case 1 -With this team composition, with each team member having a *specific (single) functional role*, there was a much higher risk of a single point of failure that would lead to a hard block for the whole team. For example, losing BA for a sprint (illness or vacation) meant that the team would not be able to perform any analysis of forecasted work in that particular sprint.

Case 2 - Almost equally challenging, with this technical skill set distribution among developers, with each developer *possessing only primary, but no secondary skill*, losing SQL person would put in jeopardy work on an entire application component: database in that particular sprint..

While teams tried to do their best at preserving democracy (no pecking order) and making team commitments (not individual), effectiveness of planning sprint work, with so many internal limitations and risk factors, was clearly compromised. Pulling work items from a backlog, in the order of priority, was close to impossible, because capacity limits of a

particular functional expertize or technical skill set were be quickly exceeded. For example, if PBI # 2 from the top required front-end Java work but a team (more specifically, only Jeff) already used up all of his capacity on PBI # 1, a team would have to skip PBI # 2 and go to an item of lower priority that did not require any work on a back-end component, using Java. But even more problematically, such single-functional specialty team composition, would lead to many PBIs becoming a representation of work of a person with a particular skill set. For example, having an abundance of 'analysis-only' stories, created by and for consumption of BAs-only (John), was manifestation of *a* classic resource management and project-ized resource planning, done by the manager BA group. This led to *local optimization* in a backlog and kept BAs *busy*, producing analysis stories in high volume. Similar cases were observed with architects, producing architecture stories-*only* and testers - producing testing stories-*only*, etc. And while everyone seemed to be overly busy with their own work, delivery of business-centric, cross-component-cutting PBIs remained low.

Although multiple TGIF teams had been experimenting with basic Scrum for some time, their efforts were aligned to application components, not cross-component-cutting features. As a result, they were constantly facing cross-team integration problems that required 'hardening/release' sprints, after every few sprints of component-centric development. Furthermore, it was practically impossible to find a real Product Owner to accept work, done by a single application (or system component) team - because no single application/component represented a customer-centric dimension. It was understood by everyone, including business counterparts of TGIF, that component-centric team alignment, could only produce a deliverable in the form of 'IOU' ("I owe you"), not in the form of a shippable product feature that had a measurable, intrinsic business value. It became apparent at one of sprint reviews, with business stakeholders and senior leadership in attendance, that lots of 'fully done' component-centric backlog items could produce an illusion of 'lots of work being done' (high output), but with no business impact (no outcome, in a form of a potentially shippable product). It was at that time when it became painfully visible that component teams (made of I-shaped people) that are able to produce only a part of feature each, are sub-optimally designed organizational structures.

To illustrate this, existing component releases routinely required several weeks of User Acceptance and System Integration Testing with "sign-off", coming from third-parties, outside of TGIF space. Sprint interruptions were frequent, feedback cycle was long, and this led to significant waste through context switching.

One of the early concerns that was raised by developers, at the beginning of LeSS adoption journey, was about potential friction between frequently delivered potentially shippable work, expected of LeSS teams, and slow/cumbersome release processes by

the rest of the organization. Specifically, the worry was around potential integration problems and continuity/automation of deployments. *It was a valid concern*. As the result of this thinking, it has become one of the key goals of LeSS adoption - ***to define/expand product definition to such an extent that there would be minimal dependency on other systems, applications and processes***. More about it below.

Defining (and Expanding) The Product

A large financial institution, like VBB, unlike a product or service company, can easily run into some challenges when trying to define its product(s). Therefore, before diving into the product discussion, and to resolve ambiguity around what the term 'product' really means, it is worth making the following clarifications:

Type of Business, Organization is in - being a factor:

If we ask an average VBB customer, what they consider as a product, they will most likely refer to a mortgage, loan, stock, bond, hedge or mutual fund or alike investment instrument, as a product. To them, whatever they buy, by spending hard-earned dollars, is viewed as a product. And it makes sense. It is highly unlikely that someone will consider a stock- or bond-trading *platform/system* that helps trading the above mentioned financial instruments, as a product. It is just not obvious. It is equally unlikely that someone will consider VBB-made mortgage-rate calculator, or personal portfolio analyzer, or data warehouse, as a product. At best, they will be considered as *tools or utilities* that are used to sell or handle products.

Yet, VBB, just like many other financial institutions, spends hundreds of thousands of dollars (sometimes millions) to define, design and develop the above mentioned *assets (not obvious products)*. Why?

Because there are individuals at VBB (e.g. traders, risk analysts) that would view applications or systems that they use daily, as products. For example, until the late 80s, if VBB financial advisor wanted to place a stock trade for her client, she would have to write a purchase order ticket on a paper slip and take it to a 'wire room' (a.k.a. cage, the back-office), where an order would be sent to a trading floor via a off-ad system, by people with limited access to a system. During the early 90s, first desktop trading system became available, for VBB financial advisors to execute their own trades, from their desks. Those systems were built, based on requirements and usage needs, that came directly from VBB financial advisors. If a customer who walked into a local VBB branch, was asked what they thought the product was: a stock or a system that makes its purchase possible - the answer would be: "a stock". If the same question was asked of VBB financial advisor, a trading system itself would be considered as a product as well.

Size of Organization - being a factor:
But even for an internal customer of VBB, such a financial advisor, an internal system may not necessarily seem as an end-to-end, final product. For very large organizations, with many systems and subsystems, sometimes defining a complete product (as described above from the standpoint of financial advisor), is a challenge. Why?

First, organizational design of VBB, on average is much more complex than that of a product company, which means there are many more layers between real end-customers that consume value (e.g. financial advisors) and true delivery teams that produce value.

Secondly, and corollary to the previous point, whereas it is relatively easy to define a customer-centric product, built by a product company (or just a small company, in general), it is not as easy to do in case of VBB.
In case of the ladder, unless we are faced with some sort of tailored and limited in scope system, we have to deal with many different applications, other internal systems and subsystems, some of which do not even have a real customer identified (also, are subject to multiple types of requests and priorities).

Let's recall one of LeSS Rules that suggests "*...the definition of product should be as broad and end-user/customer centric as is practical. Over time, the definition of product might expand. Broader definitions are preferred...*"

Based on this rule, if we run into a situation (very common in a large financial institution) that is practically impossible to expand product definition wide enough to include *all* systems/subsystems/applications, ***an attempt should be made to find and 'circumvent/extrapolate' one sub-subsystem from the remaining huge system, draw boundaries around it, so to speak, and try to find an internal customer that would be interested in consuming 'output' of such sub-system alone***. This internal customer could be an internal department/person or another downstream system or process that sees some real value in what a sub-system can produce and treats it as an *interim* product. With that, let's revert back to the discussion of what was viewed as a product by TGIF and BGIF people, at VBB.

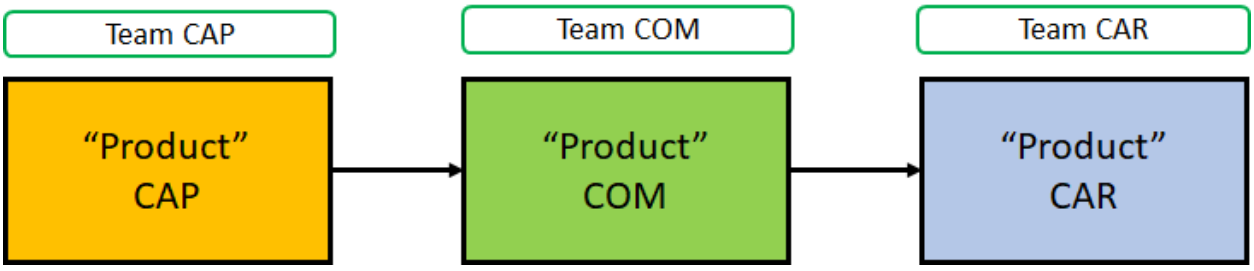
(LeSS principle: "*Whole-product focus—One Product Backlog, one Product Owner, one potentially shippable product increment, one Sprint—regardless if there are 3 or 33 teams. Customers want the product, not a part.*")

The business domain, that TGIF and BGIF people worked on was called “Document Management” - the global system that was intensely used by BGIF (business) people, for intake, transmission and storage of legal and financial documentation (electronically). Initially, prior to LeSS adoption, this domain consisted of a few narrowly defined so-called products, none of which were composed of complete cross-application/component-cutting, customer-centric features. The so-called products were defined, based on grouping together of various internal applications that historically, were owned by the same person (usually Application Owners).
Other words, organizational design and sphere of personal influence and control defined product segment composition. This resulted in the following ‘products’ definition:

- Documents Capture **CAP** - Greenfield. The process of capturing data from another upstream system, external data-feed or manual entry
- Documents **COM** - Greenfield. The process that was responsible for communicating captured data from system to system and, ultimately saving it as a document
- Documents management platform **CAR** - a legacy platform that stored all legal documents

While all of the above-mentioned ‘products’ were a part of a much bigger Document Management system that had real customers within BGIF community, finding real customers that would truly care about delivery for any of the above mentioned disjointed product segments, was rather challenging. This is something that had to be corrected: *(LeSS Experiments: Avoid… Fake team-level “Product Backlogs” 132 | Avoid… Projects in product development 238)*

Prior to LeSS adoption, the original alignment of workers within TGIF was along the dimensions of segregated segments (sub-systems) of Document Management, as follows:

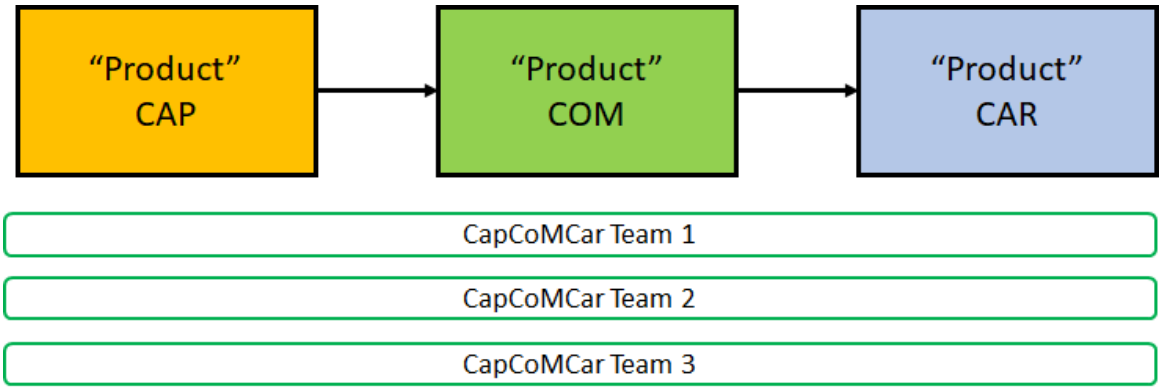


Realigning Teams (from Sub-Systems to One Product)

First, the coaches were presented with the dilemma of how to reorient development of the *three* product segment teams in a way that every team could work on each of the segments: front to back, independently, including their underlying applications. The coaches facilitated a *pre-workshop activity* with senior leadership and senior stakeholders, representing all three segments of Document Management. A couple of effective visualization techniques (business value flow, customer journey, story mapping) were used by the coaches to engage participants in a holistic dialogue and a series of use case simulations that revealed that neither of the individual/segregated product segments represented a minimally viable feature (rather, just a part of a bigger feature) that could be potentially shipped and used. Everyone in the workshop came to realize that even if a lot of work within e.g. "CAP" segment (based on its private backlog) was done, it still could not be used by end customer until its "COM" and "CAR" counterparts were done and integrated. Even if the three segments were developed concurrently, it would still be necessary to do some major integration at later point, 'gluing together' points of juncture between "CAP" and "COM" and then "COM" and "CAR".

Subsequent to that, it became obvious that it would make more sense to reorient the direction of people involved in work, and instead of having three disjointed product-segment-centric teams (CAP, COM, CAR), it would be better to create three cross-product-segment teams (CapComCar Team 1, CapComCar Team 2, CapComCar Team 3) that would be able to work on *all three* product segments. This would allow for producing thinner slices of complete functionality but more frequently.

It is worth noting that originally "CAR" segment of work was performed by an external vendor company that worked offsite (geographically, away) from the internal people. It added additional degree of complexity (time zoning, vendor engagement leads playing the role of conduits, mindset of 'us vs. them', handovers, etc). As a part of moving towards cross-product-segment teams, it was decided that vendor workers will be fully augmented/mixed with internal VBB works, in ways that would de-emphasize belonging to different companies and emphasize belonging to same cross-functional teams.



But before moving on with this effort, something else had to be done first: ***Senior Leadership had to be presented with an eye opener that segment/component-centric development was the main root cause of integration and excessive cross-team coordination problems*** (as in waterfall development) that required multiple 'hardening/stabilization' sprints - and, therefore, was costly and time consuming.

Why was senior leadership the first one to be approached with this dilemma?

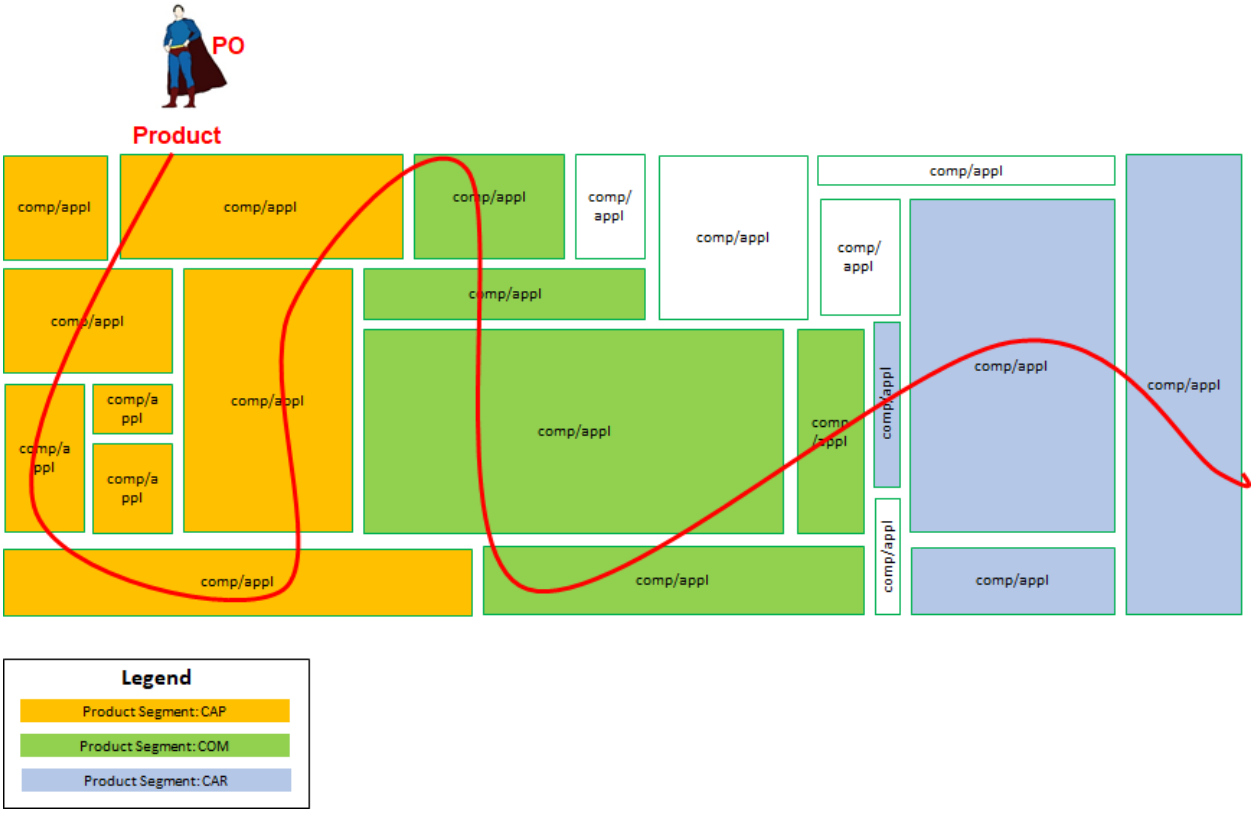
It was important that they understood some important organizational implications of moving from components to features. Specifically, with feature-centric development, usual domains of control/ownership, by component and application owners, would be loosened, in favor of feature teams, being allowed to touch multiple components, independently. This could potentially, create a lot of resistance and *turf protection* attempts, coming from former component owners/managers. Senior leadership needed to figure out a way to ensure that used-to-be component owners/managers did not feel deprived or depreciated, by the organization. This was done by offering component owners/managers an opportunity to act like component teachers/mentors, by offering guidance and learning experience to feature team members that were allowed to work with multiple components (LeSS Guide: Component Mentors 304).
Once developing this new perspective, senior leaders had a round of discussions with individuals that were "in charge" (accountable/responsible) for specific application components (leads, application owners) and explained to them that going forward, their individual contribution and performance will be measured based less on doing and more on teaching/mentoring others on the same, by conducting technology dojos and knowledge sharing workshops more frequently. People we given assurance that by empowering others with knowledge, more senior/seasoned people were neither reducing their own importance, nor putting their jobs at risk. The concept of "job security is not the same as role security" was strongly emphasized. People were also encouraged to add to their own career development plans teaching/mentoring function development - something that would be valued very highly by the organization.

...and then, the **actual all-hands-on-deck training workshop** took place.

It was held for all teams involved in the product-*segment* development, also including management and stakeholders (business and technology). The ladder group developed a lot of appetite for further learning and continuing in being involved - thanks to pre-workshop activities that they have participated in.

Essentially, the workshop became an extension/continuity of pre-workshop activities (purely, business-centric), that was conducted only with senior leadership and business

stakeholders. During the workshop, people were tasked to identify ("carve out") what would better fit the definition of a real product (CapComCar), from a standpoint of Product Owner. It required understanding how different sub-components/applications of the above mentioned product segments, would communicate with one another during *runtime*, and therefore the workshop heavily relied on contribution from developers. Any sub-components/applications that were not a part of the above mentioned three segments (e.g. data did not flow in or out of them) were also identified but left out of further discussions. They are schematically shown colored in white, in the diagram below).



During this workshop, TGIF people, discussed what particular skill set and/or domain expertise were required by each team, in order to 'cut across' multiple sub-components/applications, of all three application segments. It was apparent from the beginning that not a single team would immediately have full-stack, cross-functional developers. In fact, with some rare exceptions, all individuals possessed knowledge of one or just a few applications - not efficient to work across the entire CapComCar. The initial goal, at least, was to make sure that ALL necessary skills and domain expertise was present on EACH team, so that over time individuals would be able to cross-pollinate each other with knowledge. Initial risks of potential intra-team hand-overs were recognized.

Based on this information and individual preferences, TGIF people self-organized into teams. This was done in an open space fashion, with all people coming together and hurdling with each other, discussing best ways to cluster into teams, to get work done. Graphic illustration of the whole product (CapComCar), product segments, supporting applications, individual skills and domain expertise, geographic location, as well as other supportive artifacts - was all visualized on giant whiteboards, placed against the wall. A few additional graphic illustrations were written on flip-charts: historical learnings/shortcomings (strategic and tactical) of working in segment-siloed ways - to remind people 'the WHYs' behind the exercise.

Some line managers were on 'standby' to address any organizational/HR-related issues, should those arise. Specifically, going into this team self-formation exercise, there were some concerns about the following: attempts by team leads to influence decisions of others, building teams around existing reporting lines and/or single components (e.g. UI/UX team or DB team), persons not wanting to be on the same team with someone else, because personal dislikes, etc. (*LeSS Experiment: "Avoid… Single-function teams 155 • Avoid… Component teams 155 • Try… Feature teams 174"*). Managers were explicitly asked to *stay out* of self-organization process (outside the room) unless concerns were materialized. Luckily, the only managerial involvement necessary was with providing some information about a small handful of newly hired but not yet on-boarded software engineers that would be added to the team within weeks. Another managerial input was in the form of reinforcing that newly formed teams will be viewed and valued, as a foundational long-term-living building block, not as temporary structures that will be dissolved any time soon.

Initially, three (3) collocated teams were formed to work on the same Product Backlog. Later, the number of teams grew to five (5), by leveraging the remaining people that were not initially allocated to the first three (3) teams. This made the LeSS Sushi Roll grow/expand, but this was done by adding two (2) more properly structured teams, not just by staffing existing teams with more resources (people were aware of the Brook's Law and did not want to violate it).

Then, the teams were provided with structured education on LeSS events. First, a short recap/summary of events in basic (one team) Scrum was given. It was done graphically, by drawing out on a large white board a few sequential sprints, by one Scrum team, explaining purpose/timing/duration of each, discussing participants and artifacts and their roles. Then, a similar graphic was produced to illustrate dynamics of another Scrum team that sprinted concurrently, with the first one. A few additional graphics were created, to illustrate dynamics of a few other teams, working in parallel with the first few. Then, there

was a discussion around what it would look like (and would take) for a few Scrum teams to work together, on the same wider defined product for the same Product Owner. Questions were raised about additional minimal points of interaction and channels of communication that would be necessary to support dynamics of such organization structure. At that point, the coaches explained structure and purpose of additional cross-team events that are recommended in LeSS. Some anti-patterns (e.g. joint LeSS events, turning into 'portfolio/program status calls') were discussed and placed on arbitrarily created "do not do" list.

Once everyone understood theory and purpose behind each LeSS event, the following was implemented by the teams:

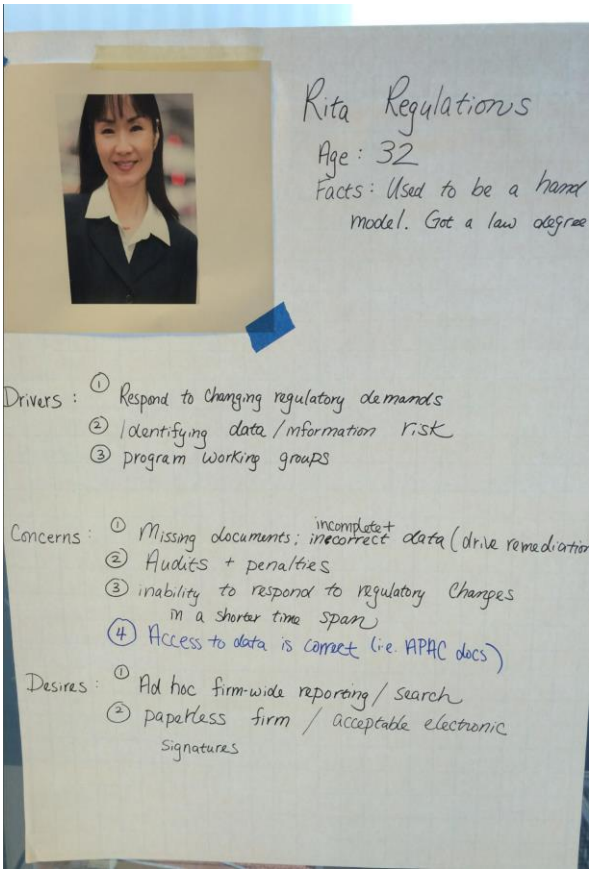
- Joint Sprint Planning, with whole teams in attendance (this has changed to having team representatives only, not whole teams, when the number of team has grown to five - in order to reduce the number of communication nodes.
- Corollary to the above, Sprint Planning Part 1 and Part 2 became more clearly distinguished, in purpose, nature and attendance. While Part 1 had just *representatives* from the three mature, teams, plus *all members* from the newly added teams, Part 2 became team-specific, with some teams deciding to join their respective sessions, in situations, where they suspected cross-team dependencies.
- Overall Product Backlog Refinement (PBR) sessions - the teams followed the same approach, as with planning sessions, by splitting their Overall PBR and PBR (for each team)
- Joint Sprint Review - now attended by all teams, without exception, with Product Owner, users and stakeholders, coming along
- Overall Retrospective - unlike Team-specific Retrospectives that were attended by Scrum Masters and teams only, it was attended by Product Owner, and more senior management of TGIF. The latter was invited to learn and take responsibility of removing organization-level impediments. One of such organization-level impediments was continuous unavailability of one of key stakeholders, whose input to Product Owner and the teams was critical. This person was continuously travelling and not too keen to attend Sprint Reviews. Instead, she would send in delegates to '*represent her views*'. This was not sufficient, since information was often skewed and twisted in translation. Senior management took necessary steps to ensure that the required person became available in future Sprint Reviews. It required load-balancing of other day-to-day responsibilities of the stakeholder.

Identifying Product Owner and SMEs

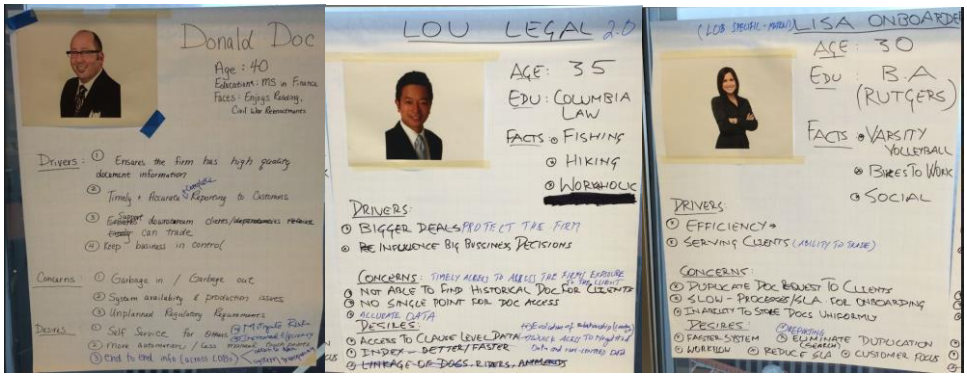
In the **next workshop**, the coaches facilitated a persona-creation exercise: with real people that represented a spectrum of use-cases for each product segment, as well as for an entire product. It turned out that regardless of the conventional segmented approach in product development, the actual activities that product users had to perform spanned across multiple segments, for practically each of the following business activities:

- Client onboarding
- Credit risk
- Documentation management (TGIF)
- Legal
- Collateral operations
- Sales and traders
- Regulatory reporting

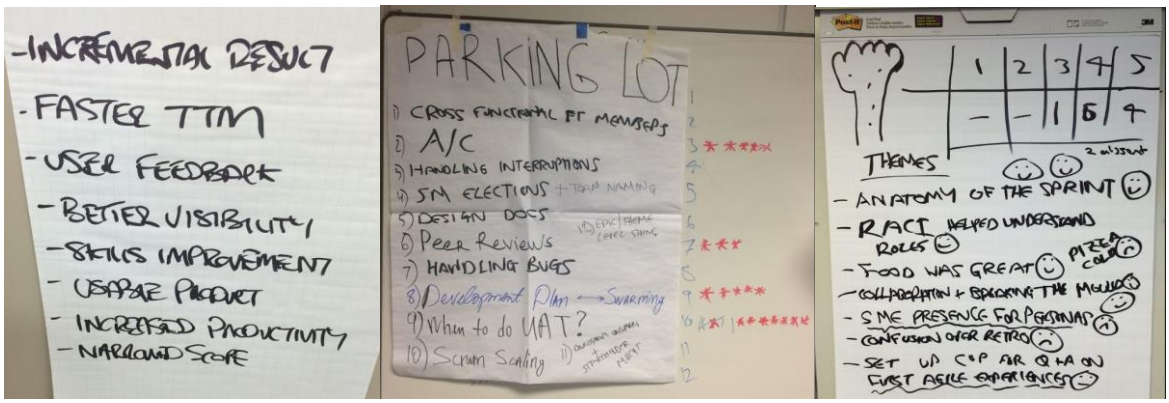
For example, the persona “Rita Regulations” was introduced, to help the teams identify various interaction use cases between a user and the system. By listing out all possible needs and activities by one persona it became clearer what features would be required in the system:



Below, are some additional roles that were identified during the exercise of user role modelling:



(some additional relevant working artifacts):



Here is a real example of a brainstorming activity in the workshop, to help with better understanding of how one of product segments (CAP) worked:

"...it allowed all VBB documents to be ingested and categorized according to a common-model. The important implication from a legal and regulatory perspective is that the ingested documents could be indexed and eventually made searchable. Needless to say, the amount of metadata for documents spanning all business areas for a large financial organisation was vast. The main technical challenge was to build a responsive data store that could meet the needs of the business. Since the data model was also continuously evolving, the system needed to be able to adapt without significant disruption or reprocessing of stored documents."

Similar brainstorming discussions were held for other product segments (COM and CAR).

Ultimately, the new <true> product vision was also formulated in the workshop (*LeSS Experiment: Try… Add and do a cross-product common goal 128*). The vision was no

longer just from a standpoint of CAP segment-only, or COM segment-only, or CAR segment-only. The vision now spanned across all three product segments ("CAPCOMCAR"), as it became clear to all that the latter three were tightly coupled and supported the same, unified business process.

Here is an example of the vision statement for CAPCOMCAR:
"*VBB employees and external clients will prefer to use our document capture platform as the most efficient solution that enables timely setup and management of products and accounts and conforms with global, legal, regulatory and control requirements. The process will include information capture, communication and storage"*

During the workshop, both business and technology stakeholders, agreed on the high-level product themes and strategic, long-term goals. Facilitated by the coaches, this was done by using a combination of user journey identification and story mapping techniques and helped visualize *big work* that had strategic meaning. All future work was captured in one shared CAPCOMCAR Product Backlog. The existing product backlog was leveraged for this initially. (*LeSS experiments: Try… Merged product backlog for a set of products 256* | *Try… Focus on the overall product 193)*. It had to be "re-refined" by splitting all/any product segment-centric backlog items into smaller chunks (task-size), and combining the latter amongst themselves in complementary ways that produce feature-centric backlog items. Each of the newly formed, teams were now able to take any work item from a backlog, regardless of a product segment it belonged to originally (*LeSS experiment: Try… Team works on multiple products 257*).

Once CAPCOMCAR Product was defined and initial product backlog has been agreed to, the teams were presented with another need: who would take on the key role of Product Owner and who would be selected from a large group of SMEs and stakeholders to support Product Owner.

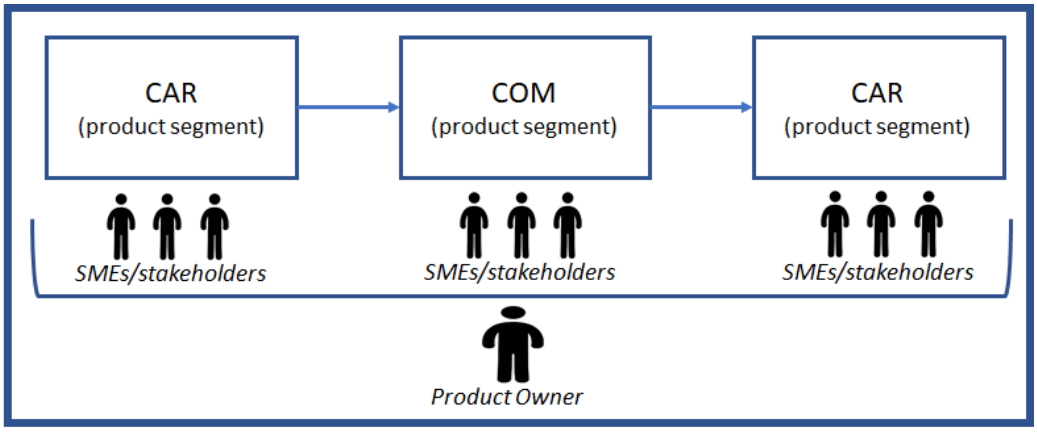
Identifying individuals for the role of SMEs/stakeholders was relatively straightforward. The decision was made to pick out three individuals that had a lot of hands-on knowledge with each one of the above mentioned product segments (steps in Document Management process): CAP, COM, CAR. For the most part, they all turned out to be the same individuals that used to support segment centric development teams in the past. Initially, selected individuals only had knowledge of their own segments. The expectation was that over time they will all grow understanding of other segments by continuously attending to the backlog and discussing work with Product Owner. There was also an agreement reached that besides LeSS-specific team events, there will be a series of regular touch points between business people (with participation of Product Owner

(section process is described below), where further cross-segment learning would be taking place - specifically, for business people)

On the other hand, identifying someone for the role of Product owner was much more challenging. At a given organizational level, it was practically impossible to find a person that would have a sufficient strategic vision and enough organizational empowerment to either have priorities or desire to engage with multiple teams. It became clear that the real Product Owner would have to come from a higher echelon of organizational structure.

BGIF (business) side of LeSS construct was now presented with a very important task: how to identify a person for the role of Product Owner. This person would have to be responsible not just for setting priorities for one of product segments but across all three segments (whole product): CapComCar.
Through a series of learning sessions and system modelling techniques that the coaches conducted with technology and business leadership, it was discovered that many pitfalls could be avoided if a real, empowered Product Owner was identified. Although, a series of regular touch points between business people (described above) were very helpful from a standpoint of sharing cross-segment knowledge, they did not help with answering the question of who would be setting priorities for the whole product. It was mutually agreed that in order to identify such person, everyone would have to 'look up' the organization hierarchy on business side - to find someone, who possessed more strategic business knowledge. Such person was found shortly thereafter, but it then presented another challenge: she did not have any knowledge of basic Scrum (let alone LeSS), and subsequently, the role of Product Owner and responsibilities of the role. This was addressed by putting Product Owner through comprehensive Scrum training (Certified Scrum Product Owner - like) followed by personal continuous support by one of the coaches.

Eventually, LeSS construct, from a standpoint of Product Owner and SME/stakeholders, support started to look like this:



CapComCar product

Expanding LeSS by Adding More Teams

While partial flip of technology application-specific/component-centric teams (only three) into product-specific/feature-centric teams has made a lot of sense, the rest of TGIF group remained in its original state. In order to increase the rate of output from a CAPCOMCAR product delivery perspective, more bandwidth was required.

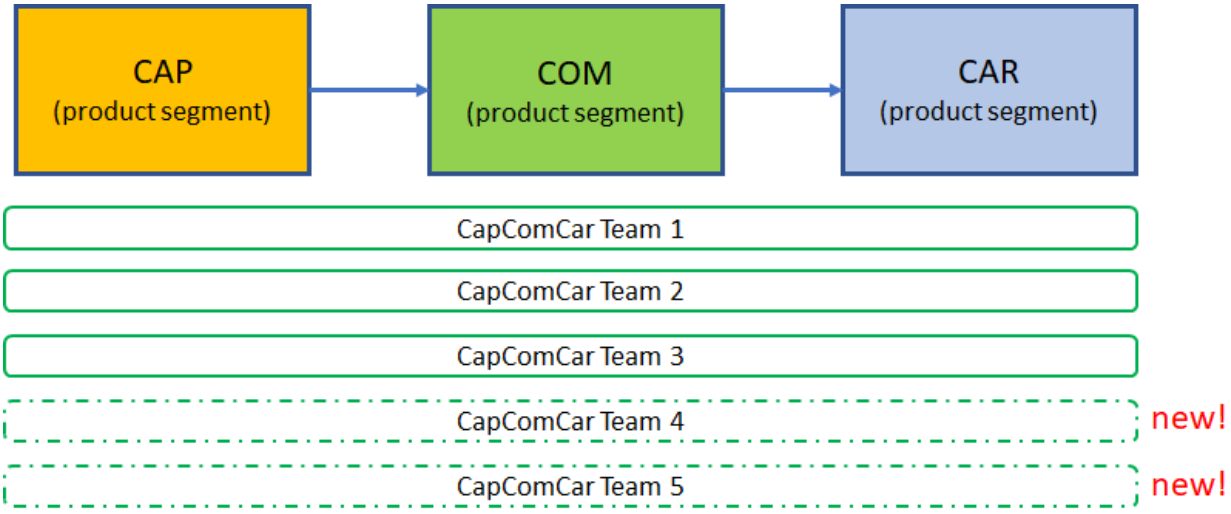
It is important to note that the need for higher output was wanted not because of a classing Contract Gaming that is frequently seen in organizations, where business asks for "more and more" and technology pushes back with "less and less". On contrary, in this case the desire to have a higher demand was more in the form of "*we [business] really like what/how you [technology] have been producing and we just would like more of it. What would it take to have more of your product delivered to us*"?

(The expected side-benefit of this expansion was reduction of potential friction between teams that work in feature-centric fashion and people that would still work in component-centric fashion as well as with the rest of the organization.)

To honor the above described needs, using the composition pattern of the first three LeSS construct teams, that were already operational, two (2) more teams were created, by leveraging human assets (please, don't call intellectual workers as 'resources', it is not nice!) from the same technology space, and put through some initial preparatory steps, before being allowed to join the existing LeSS construct.

These preparatory steps included: a refresher training on basic scrum, introduction to LeSS (guides and experiments) with emphasis on joint events (as described above),

familiarizing new teams with the backlog, priorities and strategic goals, and only then, finally “flipping a switch”, by bringing them into LeSS, with the next upcoming sprint.
The expected result of the two new teams joining the existing was an increase in the amount of highest priority backlog items that could be developed concurrently for the benefit of the entire product CapComCar.



One of the experienced Scrum Masters from the first three mature teams was then asked to pick up the new teams, whereas the other Scrum Master widened his focus across the mature three teams (now, the LeSS of five teams had two Scrum Masters).

A few most senior developers from the first three teams, were asked to temporarily take on the role of developers-travelers (*LeSS experiment: Try… Travelers 207*), and join the new teams, to lead by example and provide some guidance. The travelers, temporarily, became a *pivot* for each of the newly created teams, by teaching new members not just dynamics of LeSS but also certain nuances of different product segments that the ladder did not know. Having some people *travel*, temporarily (for a few sprints) lowered capacity of the original three teams but was considered as a worthy investment by everyone, because it helped expediting and getting up to speed new joiners. Furthermore, travelers were able to seed engineering great-practices across the organization. Such practices included CI/CD, TDD, unit testing and test automation.

To speeden the process of assimilation with more experienced teams (in terms of product backlog knowledge, ability to estimate work, etc) all teams agreed that both *new* teams would be coming to joint LeSS events (Sprint Planning 1, joint PBR) in full, whereas the three *seasoned* teams would be sending just representatives (to minimize the overall amount of people in meetings). Also, for a few initial sprints, the two new teams went into multi-team Sprint Planning 2, with at least one of the original three teams. This was done to improve learning experience/knowledge transfer of new joiners. This approach was

used for a few sprints until everyone gained confidence that the newly joined teams became comfortable enough with dynamics of the process and shared LeSS events. As time went by, participation of new teams' members became more apparent, they became more contributions to discussions and started to challenge more readily opinions of members from more seasoned teams.

Improving Overall Interaction with Business

Even after CAPCOMCAR product was properly defined and Product Owner was elected, communication problems between TGIF and BGIF did not completely go away. Direct contact between business and technology still remained to be an issue. Mainly, this came in the form of TGIF team members confusing priorities of Product Owner (and business decisions, in general) with managerial decisions that came directly through management lines. This was because of still prevailing (outside of LeSS construct) original organisational setup, with managers requesting technical improvements from developers, by bypassing the established process of business approval, bringing requests directly to teams, and justifying them by perceived urgency.

Given the potentially severe implications to developers (e.g. accusing them in not respecting subordination boundaries, leading to low performance appraisals), of refusing to obey hierarchical lines, an experiment was attempted by the teams to *inform* the Product Owner of such managerial "emergency changes". This was done implicitly, rather than explicitly, to avoid inflaming situations, and as follows:

On a few occasions, line management was invited in Product Backlog Refinement sessions, as guests, where they were asked, to state their most pressing needs explicitly and candidly, in front of Product Owner and some key stakeholders. This was discussed in the context of the teams' capacity and priorities coming from the business. Very diplomatically, line management was put in a situation, when they had to negotiate *not* with the teams but with Product Owner directly - what priorities should be. The teams merely observed and contributed to a dialogue in various ways (e.g. clarifying capabilities, limitations, dependencies, etc). By removing themselves from potentially unsafe negotiations, the teams were able to focus more on work and less on politics. This approach has worked, as the teams were no longer as exposed and were out of harm's way.

However, the systemic root causes of the "emergencies", that were mainly caused by instability of old legacy systems and recurrent production problems, were still pretty difficult to isolate and contain.

Some examples of systemic root causes:

- Lack of test automation / low unit test coverage → bugs escaping to production → urgent production fixes required → unplanned work/interruptions coming in mid-sprint → multitasking/task switching by teams → **negative impact on delivering planned work**
- Ineffective hiring policies (job descriptions, compensation schema) → problems with talent acquisition → lack of multi-skilled/T-shaped developers → scarcity of specific skill set when it is needed most → "borrowing" skill set from other feature teams (asking people to perform side-work, outside of Sprint and Product Backlogs - *more about in the section below*) → disrupting team's work dynamic → **negative impact on delivering planned work**

Minimizing Side-work and Supporting Single Product Backlog

Due to a significant amount of pre-existing intra-sprint interruptions within TGIF group, it became critical to increase transparency on the associated dollar-cost of unplanned/"hidden"/side-work. As it is often the case within large enterprise organizations, facilitating big changes required an empirical approach. For this, the teams were advised to stop using a separate backlog to manage interruptions and side-work, and instead keep all of their work in one shared Product Backlog. This allowed Product Owner to refer to one single "source of truth", instead of multiple independent "containers of wishes" - to see the overall amount of work the teams were asked to deliver, with conflicting priorities, and by doing so, set *real* priorities

Taking into account inevitable work interruptions, helped managing the teams' capacity and better reflect it during planning. After several sprints, senior leadership was presented with the data that illustrated how ad-hoc, unplanned/interruptive work diluted the teams' attention and shifted their focus away from planned and forecasted product-centric work. The main way to illustrate the problem was data collected from cumulative flow diagrams (CFD) that exposed how long sprint work, on average, spent in each status. Overall, WIP for each sprint backlog item was unacceptably long (e.g. time lapsed from start to finish, a.k.a. Cycle Time was much longer than the sum of time estimates of each of its underlying technical tasks) and it was mainly due to frequent interruptions (start-stop-start-stop), caused by new, unplanned work, being forced into a sprint.

This led to making some hard, but necessary, decisions: to mandate from requesting individuals and business groups that tried to put their priorities on top of and around Product Owner's priorities, to stop doing so. It was discussed and agreed upon by the

heads of TGIF and BGIF organizational structures, with participation of Product Owner and stakeholders, and syndicated across and by Product Owner. Initially, there was some skepticism and resistance (some usual ad-hoc requestors felt that their needs were trivialized and not given enough consideration) but it was not for long: people soon understood that by asking for more things, more frequently, while the teams were already working on something, and by doing so, constantly shifting attention of the latter away from work, would just introduce more bugs and errors and will lead to having many things partially done, as opposed to a few things fully done.
While in practice, LeSS teams still had to cope with some ad hoc, legacy technical work, at least now, they were able to clearly visualize this problem to Product Owner and senior leadership and manage their work more accurately, by not overstretching/over-utilizing their forecasts beyond capacity (queue size vs. capacity utilization training was delivered to the teams, Product Owner and stakeholders), as it referred to in LeSS experiments: *"Try… Visual management 71, Try… Visual management to see the invisible queues 111"*

Providing a Non-Hierarchy Based Escalation Mechanism

As mentioned above, the hierarchy of VBB was such that it led to command and control behaviours between reporting layers. Any action that, rightly or wrongly, deviated from the path dictated by management lines, or challenged existing norms and order, was often seen as risky and was discouraged.
Most attempts to put to light underlying problems and impediments went in vain. This was indicative of an endemic problem, as historically, the company actively resisted to changes.

The coaches faced against the dilemma: "*how to take senior leadership admit that problems exist and require attention, and then make everyone else comfortable to step up, speak up and engage?"*

To overcome this barrier, a compromise solution was proposed. It provided, at least, a safety-net for some more courageous individuals, who would otherwise have had only the option of escalating through the hierarchy and putting themselves at risk, to get their observations and concerns brought to light and to senior management.
As an experiment, the coaches have conducted a few sessions with senior leadership, educating the latter on the benefits of gemba/go-see. (*Lean thinking—Create an organizational system whose foundation is managers-as-teachers [.....] who practice Go See at gemba.*). Specifically, the leadership was encouraged to start coming down to teams' area, and talk to individuals in their work area, without leaving their seats, by asking questions about concerns, welcoming feedback, offering one-on-one. This would

be done without any special announcement, in a very casual way. They only warning that was given would be to first-line management, with the ladder being very delicately asked not to be around, in order to alleviate any potential tension or discomfort that their presence could otherwise case to their subordinates.

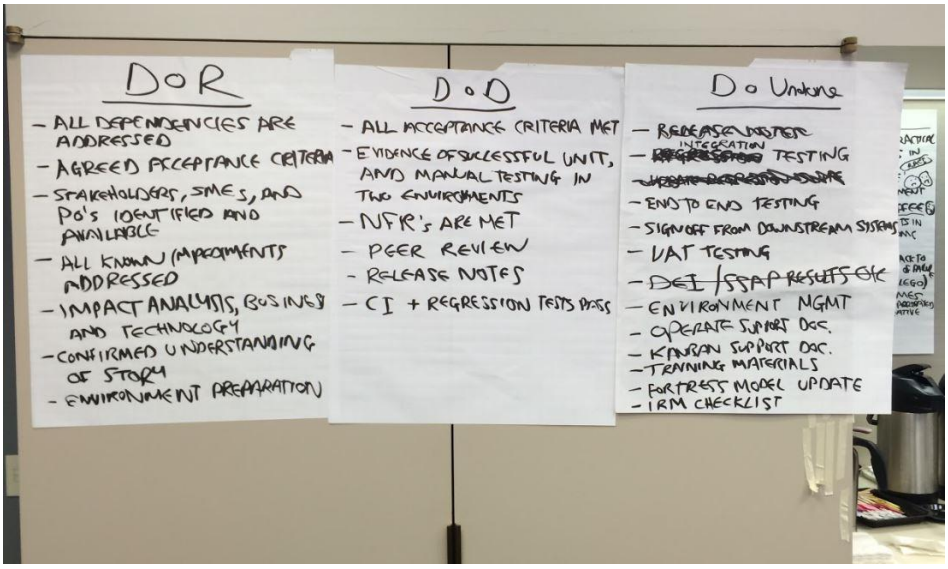
The leadership also decided to resort to various discrete escalation techniques that would encourage, individuals from lower organizational levels communicate directly to higher organizational levels. The "IRS" (Impediment Removal Service) was introduced, as means of safer escalation of problems from teams and Scrum Masters to senior leadership. It came in the form of a dedicated internal email address alias (impediment_removal_service@VBB.com) that anyone could submit their personal challenge/problem in the form of a community discussion. Senior leadership was strongly encouraged by the coaches to diligently attend to DL exchange and engage in discussing pressing issues. There was no explicit resistance to this request. The only additional nuance was that some of the more senior folks relied on their administrative assistants to do continuous monitoring of their mail in-boxes. But this was actually an advantage, not a hold up, since admins were asked to pay specific attention to such relevant notifications and bring them up to leadership's attention without a delay.

Improving Engineering Practices

Test *- "Avoid… Test department 32 Avoid… Separate test automation team 37, Try… Zero tolerance on open defects 39 • Try… Acceptance test-driven development 42 • Avoid… Traditional requirement handoff 46"*

Manual testing practices were well-established within VBB and this meant those proficient in testing were distributed in abundance across newly formed Teams. Test automation and sharing of good engineering practices was strongly encouraged across the teams within the organization. They were delivered as targeted engineering practice training series by one of the coaches (Stuart). The primary vehicle for this collaboration was Community but targeted training was also provided when particular needs arose. Teams were encouraged to transition from the established process of "testing a release candidate" using manual test guideline to testing features as part of the Definition of Done.

(Note: Below, is the illustration of Definition of Ready/Done/Undone derived by all teams in one of the workshops. Notice the initial reliance on manual testing in the DoD.):



Since teams were working on a greenfield project, there was a great opportunity to have automated tests for every backlog item. Specifically, there was no need to play 'catch up' by automating tests for backlog items that were already built and delivered in previous sprints. Other words, the teams were able to proceed, practically concurrently, with development and testing - in the same sprint. Unfortunately, manual testing remained in two cases, both at the request of the teams:

1. The first was Integration Testing performed by the team in all environments
2. The second was User Acceptance Testing (UAT) performed by an external, separate group with their own cadence.

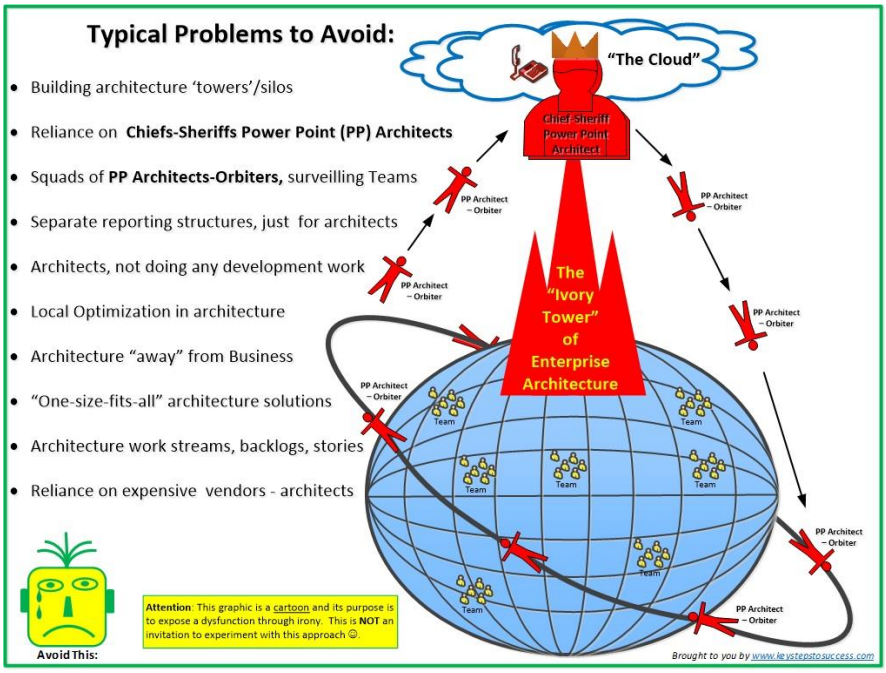
Both, the teams and technology/business managers, felt it was important to continue this practice until trust was built in the automated toolset. As mentioned in the above Definition of Done picture, manual integration testing continued across a minimum of two environments for any product deployment including DEV, UAT and Production. For example, this included a deployment to DEV environments at the end of each Sprint. Deployment to UAT would then occur as Undone work that carried over to the subsequent Sprint. This alone resulted in significant ongoing overheads. Interruptions to the teams existed because of slow feedback and a plethora of release related sign-off meetings that made it very difficult to facilitate positive change across the board fast. For example, teams would typically wait weeks for UAT sign-off after a feature was accepted by the Product Owner. Any feedback from the UAT team that required code changes would manifest as urgent interruptions to the development team, causing large overheads from context switching. After passing UAT, releases into Production would require

coordination across each product and could only occur in restricted time-windows. Most of the coordination was around ensuring parity between product versions tested in UAT and what would be released to Production. The manual testing cycle only exacerbated staying on top of this situation but management were not in a position to devote sufficient time to purely technical endeavors such as proving out a fully automated integration testing suite. Those seemed to be the most prevalent factors.

Design & Architecture *- "Avoid… System engineers and architects outside of regular feature teams 300, Try… Technical leaders teach at workshops 302 • Try… Hire and strive to retain master-programmer 'architects' 302 • Avoid… Architecture astronauts (PowerPoint architects) 302"*

Although perhaps being something to avoid, the TGIF technical tower had an architecture function external to the teams. Amongst other things, the architecture team was responsible for defining the high-level multi-year landscape of products in the tower and how the latter would fit together in the broader context of the company. In practice the architecture group was able to find ways to effectively collaborate with Teams and work as an engaged stakeholder to identify when specific architectural tasks would be required for a given PBI in Product Backlog Refinement sessions. The architecture group allowed LeSS teams to fully own implementation, without enforcing any low-level details. Some of the most senior architecture group members started running Community like workshops to educate individual teams on VBB-wide mandates and standards that drove architectural decisions.

In the large-enterprise context of VBB, the architecture group was also able to provide "air-cover" for LeSS teams in the technology vertical and even helped promote new product features. Their main driver for this internal (to TGIF) architecture group to protect LeSS teams could be viewed as good Samaritan's act. TGIF architects saw value in owning and implementing local decisions, by people that were closest to action. They were also cognizant of dysfunctions and challenges that centralized power-towers of architects could create. Some of them are illustrated in the diagram below:



There were frequent attempts from external firm wide architecture groups that had the potential to be very disruptive, to cause confusion and delays for LeSS teams, if TGIF organization architecture team did not intervene and protect.
Still, the TGIF architecture group, unfortunately, did not completely dissolve and fall into individual Teams; they still remained as "architecture jet fighters" (they were closer to action) and were protecting TGIF LeSS teams from "architecture space aliens" (they were too far away from action).

In addition to architecture groups, technical management lines also wished to dictate architectural directions, from time to time.. This was certainly the case in TGIF, where a more senior manager would introduce (without consultation with the teams) a weekly "Design meeting". This had the effect of severely hampering work in-flight and future work, and was a source of conflict for the senior developers across all teams. Due to seniority of a meeting orchestrator, this was extremely difficult to course-correct. It took a number of sprints until the problem was recognized by senior management (Scrum Masters escalated this problem and qualified it as an organizational impediment) and this low-level centralized decision-making attempt was abolished in favor of joint LeSS events.

Legacy Code *- Try… "Increase organizational support for learning development skills 340 • Try… Support more self-study 341 • Avoid… Trivializing programming 341"*
Across the firm, VBB was implementing several initiatives to provide metrics on code quality (From SonarQube: complexity/duplications in code, violations of coding rules, defect count, unit test coverage. From Jenkins: CI/CD pipeline). This meant that there was a

baseline “score-card” for key source code metrics. Given the size of the company and the sheer number of lines of code, the baseline score-card had become too relaxed to be useful. An experiment was therefore conducted, specifically within TGIF, to introduce static source code analysis with the latest available rulesets across all languages within the group. Through regular on-demand scans, teams were encouraged to monitor changes to the code quality and PBIs would in some cases not be accepted based on the results. Decisions were made by Product Owner, and for the most part, were in favor of a bug-free policy. On rare occasions, when a bug was rather minor and not impacting core functionality, a PBI could be accepted with very minor omissions, under conditions that the latter would be remedied in the next sprint. all formed part of the Definition of Done. More in-depth reviews were carried out on an ad-hoc basis as required. With code quality becoming a regular part of the development process, quality improved (number of discovered bugs decreased).

Forming Communities

(LeSS Experiment: Try… Cultivate Communities of Practice 252 • Try… Use CoPs for functional learning 253.) Several Communities of Practice were also seeded during the initial phase of a coaching engagement.

This started with the **Scrum Master Community**. For example, in Scrum Master community, a lot of emphasis was made on crafting facilitation skills of SMs and their ability to distinguish between team-level (internal) impediments and organizational (external) impediments. Based on the community involvement/participation it was also easy to differentiate between individuals that could become great potential candidates for the role of Scrum Master and those that would be not suitable for the role because of their mind set, behavior and career goals (“left-over” people). The latter type of people was easy to identify by seeing how they presented themselves to others: as super-achievers, command & controllers, “I am the best/I am expert”.

Through the community, Scrum Masters were able to further develop a mindset of coaches and enablers by exchanging their experiences/lessons learned, facilitation techniques, recommended books and other references.
Another common theme across all of TGIF teams was a lack of maturity in automated testing. To remediate this, **Test Automation** community was created. This allowed experience to be shared across teams in a safe way - to agree and establish better testing practices. Noteworthy, that before adopting LeSS, TGIF had a soft boundary that separated dedicated test automation specialists from the rest of developers. This was not a formal organization separation but it did create an element of a silo, segregation of duties and intra-TGIF handovers. By shifting from “softly defined” dedicated test-

automation groups to Test Automation community, most senior test automation experts were now encouraged to become less of 'owners of automation process' and more of community leaders and mentors, who would teach the techniques to others. This gave birth to gradual reabsorption of test automation activities into respective teams. Subsequently, each team's Definition of Done became more mature, as test automation was added to it. Respectively, this alleviated the need of having 'undone' (test automation) work, to be handled by dedicated teams, outside of feature teams/their sprints *(**LeSS Experiment**: Try… Eliminating the 'Undone' unit by eliminating 'Undone' work 245*). Ultimately, this had multiple wins for the organization: reduction of cycle time from 'concept to cash' - for each requested feature, simplification of organizational design, due to removing silos and single-specialty expert groups (local optimization) and therefore reducing systemic "muda" (waste/overhead). It also, naturally 'forced' for the needed expertise to become a part of each team's asset.

"Narrowing the Gap between Science and Business" (Daniel Pink)

*(**LeSS Experiment**: Try… De-emphasize incentives 270 • Avoid… Putting incentives on productivity measures 271 • Try… Team incentives instead of individual incentives 272 • Try… Team-based targets without rewards 273 • Avoid… Performance appraisals 273)*

LeSS adoption at TGIF was an experiment of organizational restructuring, inside the enterprise that historically had a deeply rooted conventional, hierarchical, top-down command & control culture. Both, the coaches and senior leadership, understood that in order for LeSS to succeed, there was a need to adopt the concept of 'organization within an organization', by ring fencing LeSS adoption efforts with protective boundaries.
Practically, what was established is a small ecosystem, with a high degree of autonomy, sovereignty, purpose and decision-making power, built of people that were able to define their own rules of engagement, interaction and relationships. Exchange/communication/interaction with the rest of the organizational was minimal and was mainly funneled through remaining management and senior leadership.

Outside of those boundaries - the rest of VBB enterprise would remain 'as is'; inside - LeSS Sushi Roll, composed of TGIF and BGIF, with minimal (externally facing and more administrative than 'command/controlling', e.g. procurement of hardware, software, recruiting of intellectual assets) necessary management layers, customers and a other *'instances'* of centralized organizational domains, such as finance, HR - coming in the form of locally controlled policies and norms. One example of such locally controlled norm ('instance') was emphasis on team-level ownership, responsibility and performance, not individual-one. Although the process of individual performance appraisal/evaluation, officially, still existed local management put less emphasis on it and informally trivialized

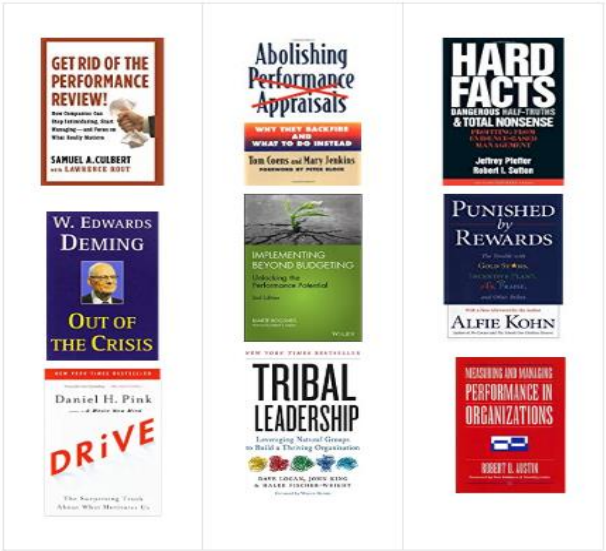
its importance. Valuing (and praising) team performance over individual performance has become an 'unwritten code of ethics' that drove individual behavior. It was also made implicitly clear that in order to get promoted, and subsequently, secure a higher compensation, individuals did not have to fight for control, ownership and act as heroes.

Please note that term *'instance'* is used here to signify the fact that it was possible at the time of the experiment to create de-novo, inside LeSS construct, the above mentioned organizational domains, as independent organizational structures. However, what became possible, with support of senior leadership, was informal redefining of some norms, values and principles that were critical for LeSS success.
With this approach, harm caused by employee stack-ranking, individual performance appraisals and monetary rewards (incentives, perks and bonuses) was recognized and partially addressed. For example, by emphasizing team performance as a paramount of success, senior leadership has decreased the level of internal competition and "I am the best" stance (as described above). Unfortunately, the overall official process (organization-wide), still persisted but its harm was reduced, for the most part, to additional overhead, associated with entering data in internal systems of record.

Specifically, senior leadership and mid-level management involved in the process of appraisals and rewards was educated on severity of harmful impact that the above mentioned processes could make on individuals, teams and the organization overall.

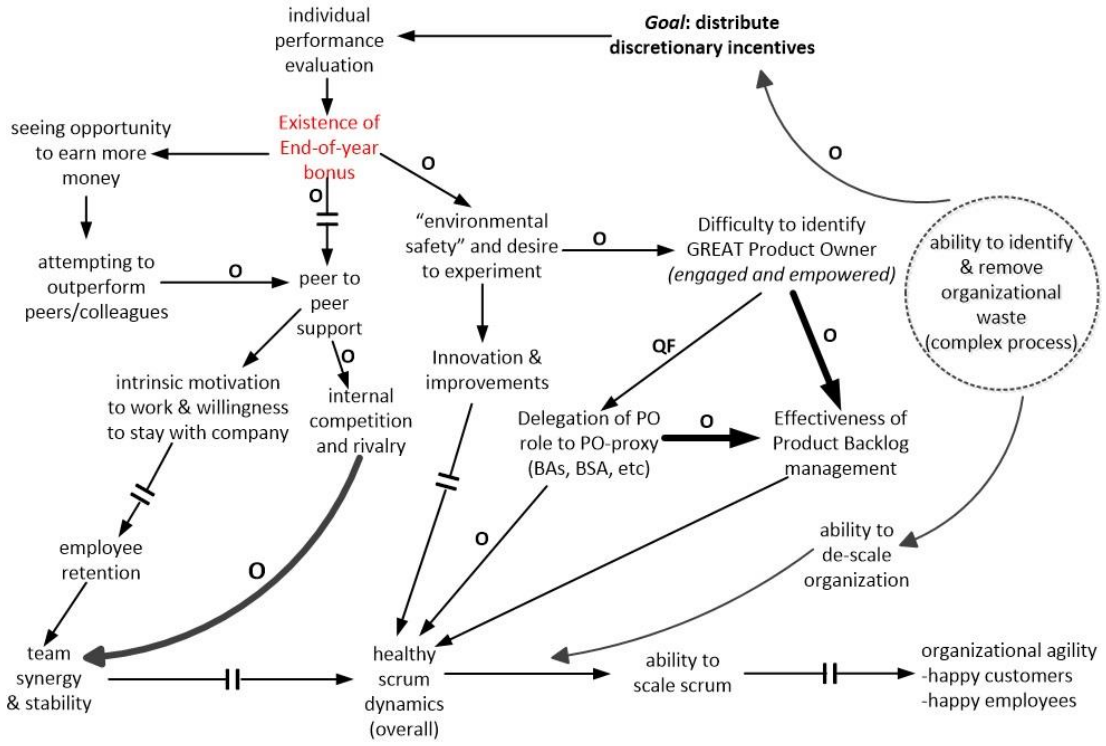
As a part of leadership education, main themes and excerpts from some well-known publications were presented to parties involved. Some of the publications are below):

"There is a mismatch between what science knows and what business does"
Psychologist Dan Pink



A few workshops were conducted for senior leaders and HR business partners to discuss:

- Research and studies of how individual performance appraisals and their linkage to monetary incentives can cause harm to employees and organizations (summarized, as case 1 and case 2)
- Systemic cause and effect relationships between individual performance appraisals/bonuses and health of Scrum dynamics. Below, is an example of a causal loop diagram that was produced during one of the discussions with managers, to visualize the problem and drive people towards better behaviors:



Specifically, strong messages were delivered by the coaches to everyone that by extrinsic motivation (a.k.a. manipulation) that drives individual performance, also causes internal competition and antagonism among employees, and their willingness/lack of intrinsic motivation to work together in a mutually supportive way.

Since it was not possible to explicitly change enterprise-wide HR policies and norms (it would draw too much undesirable attention to LeSS adoption and would probably put it at risk), the decision was made to *implicitly* encourage TGIF workers to define their own individual career objectives and development plans in support of organizational agility. The management, now being educated, was more effective in spotting undesirable behaviors and anti-patterns (e.g. rivalry, internal competition, etc). One of such examples, would be calling out and discouraging working in silos, without sharing information, and then presenting it to others in the form of 'I have delivered…'.

To address the above organizational constraints, the management tried to create environment conducive to improved behavior by developers. The following was made clear and continually stressed during organizational events (e.g. town halls) and regular communication:

- Importance of becoming T-shaped workers
- Benefits of learning new development tools and techniques
- Behaving towards other teammates in supportive, team-like fashion, as well as valuing team performance, over individual performance.

Also, the language containing "*I own"/"I delivered*" was less encouraged than "*We own"/"We delivered*". Team members were strongly encouraged to provide to one another more candid and genuine feedback during retrospectives to contribute to each other's maturity and growth. Scrum Masters were also specifically coached on how to act during retrospectives, to prevent events becoming too inflaming and galvanizing (e.g. interjecting when conversations would heat up; catalyzing and redirecting, when conversations would deviate in a wrong direction) . Above all, a very strong emphasis was made on customer happiness with the overall LeSS delivery, being the most influential factor that identified financial rewarding of teams, and subsequently, individuals.

While, at the end of the year, each TGIF employee was still delivered by his/her line manager a end-year review and "report card", it had much less bearing on how an employee was rewarded financially. Individual adherence and genuine support of agile transformation efforts and LeSS adoption were valued more than individual delivery and heroics. Letter-grading was still assigned informally by managers (it was entered in a centralized system of record, as it was required by HR) but everyone understood and spoke freely about the fact that it had practically no value to anyone.

Introducing Agile Budgeting

*(**LeSS Experiment**: Try… Beyond budgeting 261)*

The idea of using dynamic forecasting (rolling-wave score-cards) was introduced to management and to people that were typically responsible to annual budget planning. It was done in the form of 'comparing-contracting' LeSS (Scrum by multiple teams) with "copy-paste scrum" (many teams doing their own, independent Scrum). A few agile budgeting workshops were delivered by the coaches to people that were involved in the process of budgeting (also, "Implementing Beyond Budgeting", by Bjarte Bogsnes was discussed, and most important takeaways from this book were reviewed. People were

also encouraged to subscribe to Beyond Budgeting Round Table (BBRT) newsletter, for on-going self-education and awareness.)

The following three main benefits of agile planning/budgeting for LeSS, were continuously stressed to management, finance people and other representatives from business, by the coaches, during recurrent meetings.

These benefits were also means of seeking additional organizational support for LeSS adoption:

- When up-to-five LeSS teams work synchronously, together (side-by-side), on the same widely-defined product (real), their shared understanding of work type, size and complexity (having certain scrum events together really helps!) is higher. As a result, when it came to forecasting a completion of work (features), five LeSS teams were be able to estimate work more accurately than five loosely coupled teams ("copy-paste scrum") that work completely independently, on unrelated initiatives. Why would this be this the case? Because in LeSS, through shared events, team representatives, would exchange information with one another about their own as well as their respective teams' capabilities, skill set, domain expertise, as well as share knowledge and develop understanding and appreciation for each other's strengths, weaknesses, etc. In "copy-paste scrum", where every Scrum team does its own unrelated work, this is not possible.

- Since all LeSS teams work for the same customer (Product Owner), there is a much higher chance that they could develop a shared understanding of product vision and strategy, as they would get it from the same authentic source (Product Owner) – this would lead to a more effective planning.

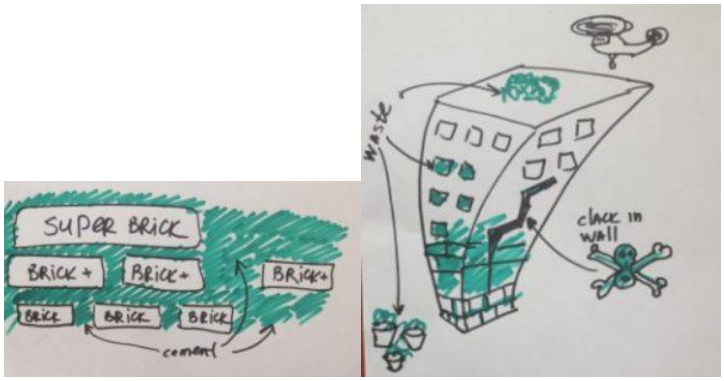
- Having more direct correlation between development efforts of LeSS teams (output, in the form of shared PSPI) and business impact (outcome, in the form of overall ROI), made strategic decisions about funding much more thoughtful: customers would understand what business value they can receive, based on an investment they make. When real customers can directly sponsor product-centric development efforts, by getting real-time feedback from a marketplace and deciding on future strategy, they (customers) become much more interested in dynamic forecasting, as it allows them investing into what makes most sense, at the moment. Dynamic forecasting of LeSS, allows increasing/decreasing a number of scrum teams involved in product development flexibly, by responding to increased/decreased market demands and/or product expansion/contraction.

Flattening Overall Organization Design

*(**LeSS Experiment**: Try… Keep the organization as flat as possible 241)*

Throughout LeSS adoption experiment, one of the key messages that was continuously delivered to senior leadership of both, TGIF and BGIF, by the coaches, was that *organizational design* is the *first order (key) factor* that is responsible for organizational culture, individual behaviors, norms, values, principles, tools, techniques. Various coaching tools and techniques were used for this: the above mentioned CLDs - to visualize system dynamics, confidential surveys, one-on-one coaching sessions with technology and business people involved in LeSS adoption - to explain individuals' perception, ambitions and motivation - they worked best in situations when people wanted to brainstorm ideas, decisions and their system implications together, real-time. Some cartoon-style graphics were used to convey the concept of 'less is more' and 'bigger does not mean better' - they worked best when some provocative idea needed to be introduced implicitly/in passing, in the form of a joke, so that it was not too abrasive and bold. (These graphics also became a part of the article published on less.works):

Conventional organization



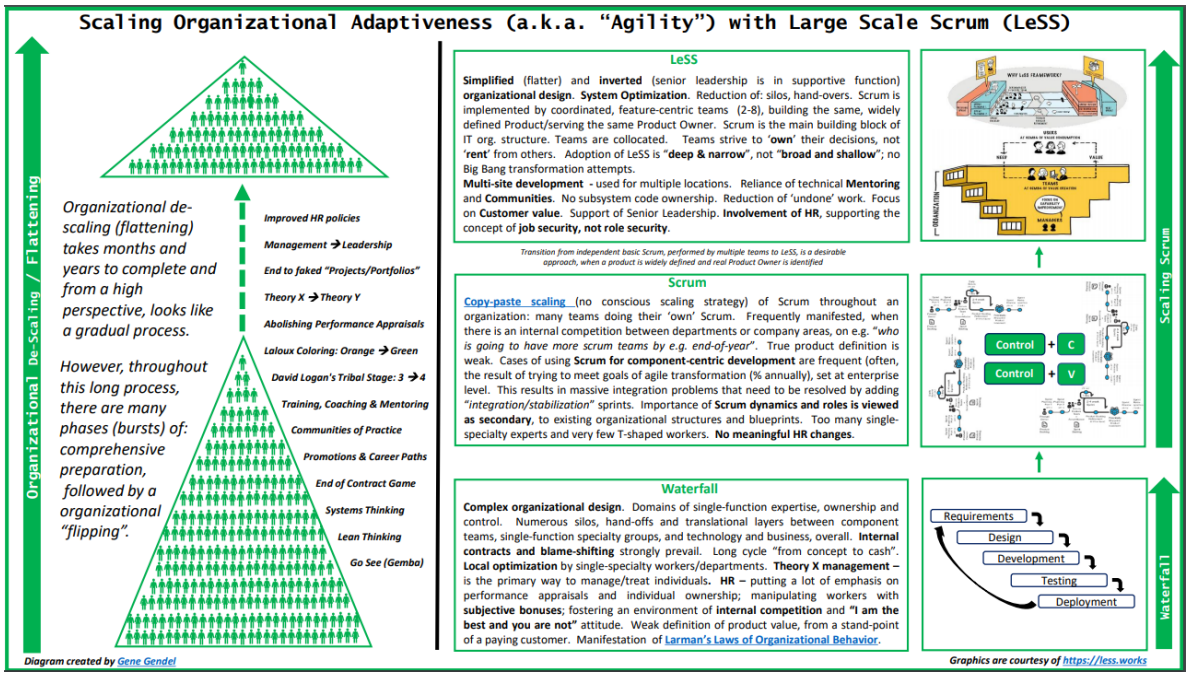
LeSS organization

In sum, all techniques revealed the same thing: organizational complexity, thickness of management layers and the persistence of no-value-adding organizational silos, diseases organizational efficiently, happiness of workers and clients and, ultimately, adversely impacts organizational economics.

As a result, some steps were taken to improve dynamics within TGIF part of LeSS. They were as follows:

- Strong messages were delivered by senior leadership that becoming a 'line manager' (by title) and acquiring report-ees did not equate to a guarantee of promotion or salary increase (paraphrasing e.g. "*...organizational seniority and compensation are not dependent on a number of subordinates in a reporting structure*"...)
- Number of people, reporting to the same manager, was maximized, as long as it did not violate some hard-written, company-wide HR rules (about # of report-ees per manager). This was done to reduce unnecessary reporting layers
- Individuals were strongly encouraged *not* to perceive their immediate management as an impermeable layer, above and beyond which they were forbidden to go. On contrary, a series of skip-one-level events, and one-on-one with line-manager+1 touch points were instituted to increase visibility of team-level dynamics and to bring more senior management closer to real action: gemba/go-see (*LeSS Guide: Management: Go See 125*)
- To strengthen the message that the company's directory reporting lines were *not* the most important determining factor of human communication, senior leadership (at recommendation of agile coaches) had instituted the Impediments Removal Service ("IRS"), as means by which, any team member (or non-managing employee) could escalate his/her problem or concern to senior leadership, without fear of repercussion.

Below, is the graphic illustration that was used to educate the organization on the concept of organizational flattening that was required for scaling organizational agility (adaptive-ness) and maturing the organization from waterfall to LeSS:



Reference: http://www.keystepstosuccess.com/wp-content/uploads/2019/05/scrum_scaling_org_descaling-v2.pdf

Conclusion

LeSS adoption effort had a positive impact on the following fronts:

- Business customers were pleased with continuous delivery of business value. It gave them a better opportunity to forecast completion of big strategic goals and foresee any potential delays. Moving from component/application-centric delivery to feature-centric delivery, drew interest of many stakeholders and end-clients. Also, the level of transparency and predictability brought by LeSS development has grown much higher to everyone's satisfaction. Relationships between technology (TGIF) and business (BGIF) were at their peak-best during the LeSS adoption experiment
- On both sides, TGIF and BGIF, people learned how to identify organizational impediments and relate superficial discoveries to deeper, systemic root causes, that affected an entire system. This learning will stay with people for a long time.
- The created communities became an effective media for individual learning and many people started using them very effectively for personal career growth
- Agile engineering practices grew deeper roots into TGIF and beyond, positively affecting technology group, at large.
- A handful of seasoned Scrum Masters was nurtured and some of them became so passionate about becoming change agents that they have decided to make this into a career journey, inside and outside of VBB

The following challenges still remained unresolved at core, by the time both coaches departed. Unfortunately, some of the challenges were not completely removed, and continued to resurface as the coaches were exiting:

- Component/application ownership did not completely mold into mentorship. There was still implicit/hidden resistance by former application owners to completely give up control/ownership and become mentors.
- "Left-over" people were not effectively accommodated by other parts of the organization (other areas, cross-training) and continued to put up invisible resistance to LeSS adoption
- Self-management remained a challenge, as organizational reporting lines and HR policies' limitations still reminded of themselves. For example, individuals were still required to "work with their managers" on individual career plans, even in situations when managers had very little bearing/influence on decisions.
- Mid- and end- year performance reviews, followed by subjective bonuses, continued to affect individuals' morale and enthusiasm, even though their importance was trivialized

========== THE END ==========