FIT-GAP ANALYSIS AS INTRODUCTION STEP TO BUSINESS PROCESS STANDARDIZATION

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Purpose: The purpose of this study is to identify: (1) business process fits and gaps, (2) gaps allocation to process towers and categories, (3) IT related gaps, (4) IT tools requiring improvement, (4) placement of the IT related gaps on Heat-Map, (5) compliance related gaps.

Design/methodology/approach: The fit-gap approach was to identify a differences between the referential Finance Operational Model, and "as is" processes. Fit-gaps were identified with application of workshops and brainstorming discussions in exemplary finance shared service center, delivering service to 36 independent entities located in 11 EMEA countries. Data collection plan was built based on Finance Operational Model taxonomy and service catalogue.

Findings: Findings of the study are: during this study 4999 fits & gaps were found: (1) 36.2% of activities fully fit to the referential model, (2) 28.8% activities require adjustment of 'process placement', and transition from one location to another, (3) 19.5% of gaps are allocated to IT category, where smaller (7.9%) or bigger (11.6%) adjustments of IT infrastructure need to be planned, (4) 15.6% of activities require changes in the way of working. 27.5% of identified gaps impact compliance.

Research limitations/implications: Due to project time frame limitations, the finance processes were reviewed and drill down to the level of single process, not single activity.

Originality/value: The value of this study is presentation of the business areas, which needs to be adjusted to meet requirements of the finance referential model on the organization's way to process standardization.

Keywords: fit-gap analysis, process standardization, finance operational model, IT process gaps.

Category of the paper: Research paper.

1. Introduction

Improvement of the IT technology is one of the fundamental enablers, which is helping to increase processes quality, performance, efficiency and serviceability, understood as speed of service, availability, lowered cost and effective development of a professional relationship between user and supplier (James, 1996). Process design is a key phase of the business process management lifecycle. The resulting models form the basis for process implementation and execution (Pajk, Kovacic, 2012). The company being subject of this study has developed its own finance operational model, which provides the best practices for conducting the business. According to authors of *Fit gap analysis – the role of business process reference models*, the models are having following characteristics (Pajk, Kovacic, 2012):

- Are representing the best practices for conducting the business.
- Are having universal applicability.
- Can be reused as for example blueprints for development of the information systems.

To make the core business processes obligatory for all, an experienced process owners created correct definition of the process as a macro-level model (Rosenkranz et al., 2009). The main focus of the reference model created in exemplary company is a business process, thus the outputs of the model design were detailed process procedures and maps (including main process steps/activities and process participants), created globally for the entire finance organization and for all finance processes conducted in the areas of: order to cash (O2C), procure to pay (P2P) and record to report (R2R). After approval of the global process documentation by the company Senior Management, the referential business model named the *Finance Operational Model*, became future aspiration of this finance organization.

Company being subject of this study is a leading global producer of the special materials used by manufacturers of iron, steel and aluminum. Historically, single manufacturing entities have been acquired and became one big organization, with their diversity in technology & IT infrastructure. Today, the European region is composed out of 36 independent manufacturing entities, located within 11 countries. Each entity is represented by a finance teams, called the Retained Organizations (RO) who is the service receiver, and a single Shared Service Centre (SSC) of EMEA, delivering financial services to these 36 manufacturing entities, who is the service supplier. Shared service of EMEA employs over 100 employees and was selected as a pilot area for implementation of the new Finance Operational Model.

After Finance Operational Model development and approval, organization focused on installation of the model. As the entire venture was complex and multidimensional, the project management structure was put in place, project was divided into smaller sub-project tracks, led by individual Project Managers, reporting to Program Manager. The Chief Financial Officer & Senior Management of the company were assigned as the Steering Committee for the entire project and had signed off project plan with its due dates for individual project activities.

Fit-gap analysis described in text below, was part of the project dedicated to process standardization & process improvement, where following steps were defined:

- Detailed project planning.
- Identification of business process fit gaps.
- Process standardization, by implementation of the improvement recommendations aiming minimalization of the identified.

Diagnose of IT infrastructure was critical to the Board of Senior Management as based on fit gap analysis certain budget & resources allocation as well as business decisions need to be made, with respect to the further process standardization objectives and project timelines.

The aim of this study is presentation of the business areas, which needs to be adjusted to meet requirements of the finance referential model on the organization's way to process standardization.

In order to achieve the purpose of this study (and the objective of the fit-gap analysis) following items needs to be identified:

1. number of fits and gaps,
2. gaps allocation to process towers and categories,
3. ratio of the IT related gaps,
4. find scope of the IT related improvement opportunities, in the meaning of ERPs and IT tools kinds, which needs to be improved as part of the future process standardization,
5. assess impact and complexity if IT related gaps, to prioritize actions,
6. identify number of compliance related gaps.

In order to fulfill the purpose of the study, following questions can be posted:

- How many processes from all run processes do not meet the requirements of the targeted finance model?
- How many gaps are allocated in IT gap category and other categories?
- What is a gap placement: process tower?
- What is the complexity/impact of changes required for IT technology area?
- What ERPs/ IT tools require improvement?
- How many compliance related gaps are within IT category gap category?

The output of the fit-gap analysis: the full list of process fits and gaps, together with the improvements recommendations was used for preparation of the process standardization roadmap. Roadmap became a tool useful in further installation of a referential process model on a planned and agreed level of standardization, which has been established as sufficient to create already a strong foundations of the process driven organization.

2. Literature review

As per literature review, gap analysis is a recognized tool, used in variety of disciplines, such like: service, IT, engineering, finance, human resources (Koripadu, Subbiah, 2020), medical or biological branches. As per author of Fit Gap analysis Methods for ERP Systems (Ancveire, 2018), the 'fit-gap analysis', also named 'gap analysis' is a method used in projects requiring the comparison of enterprise business processes with standard system processes. Paul James in his book of *Total Quality Management*, in chapter *Why Plan?*, wrote that planning is preparation for change, and in this context planning means: evaluating the past and present in order to ensure the best possible future (James, 1996). Authors of *Gap analysis of the Online Reputation* (Rodriguez et al., 2018) inform, that gap analysis can be used as a tool, which facilitates identification of the main problems of the organization. The gap model, used to achieve the total quality in the management of services, is based on reducing the differences between the expected and perceived service by customer (Rodriguez et al., 2018).

According to authors of the *Methods of Fit Gap Analysis* (Pol, Paturkar, 2011), who were working on identification of gaps in ERP system, there are four methods widely used to conduct fit gap analysis:

- Simulation based, where all the stakeholders are attending the workshop to understand and compare system requirements with offered functionalities.
- Brainstorming discussion based, where highly skilled and knowledgeable system consultants are analyzing and presenting system features at the open forum discussion, later noted as fits or gaps.
- Questionnaire based, where questions are matched and compared with system functionalities and features in order to arrive with system fits and gaps. Questionnaire is used for probing of requirements and prepared by highly experienced system consultants.
- Hybrid type, where all three forms from above are utilized.

The following advantages were presented next to the above methods (Pol, Paturkar, 2011), simulation based methods enables to get full view of system functions and capability, brainstorming helps to get 360 degree overview of enterprise requirements by using problem skills and methods, questionnaire is faster method to execute comparing to other methods, and hybrid helps to achieve most desired output as best of all methods.

The requirements prioritization and traceability play an important role in the identification of functionality gap (Ancveire, 2018). The author of *Fit Gap Analysis Methods for ERP Systems Literature Review* (Ancveire, 2018), focuses on three levels of the fit-gap framework, which in ERP (SAP) context, are as follow: application requirements, process requirements and design requirements. ERP system integrate standard business practices that suggest an effective and validated way to perform business operations (Pajk, Kovacic, 2012). These days ERP systems

need to offer a lot of functionality in order to cope with a large number of business requirements. This functionality needs to be aligned with the business in order to create value for the organization (Pajk, Kovacic, 2012).

As an outcome, gap analysis estimates and demonstrates gaps (or fits) in many areas (Ancveire, 2018) of business operation. The fit-gap analysis yields a list of gaps identified, and also discuss methods for reducing the gaps (…) and are identifying gap groups, for example (1) ERP modification, (2) business process modification, (3) traceability & prioritization of requirements, (4) use of third party application software and (5) training of customer or project team (Ancveire, 2018). As per author of article Gap analysis, if expected outcomes from the business fit-gap study exceed aspiration, the objectives can be revised upward. When aspirations substantially exceed possible performance, it may be necessary to revise the objectives downward (Sammut-Bonnici, Channon, 2015).

Authors of publication *Beyond cost efficiencies in shared service centers* (…), results of the fit-gap analysis can be used for improvement of the organizational business processes performance, and become trigger to process standardization. Processes are at the core of business operations. They enable interactions between stakeholders to effectively fulfill activities with specific purposes. Organizations need to be consistent and coherent as to how they structure and provide their services, as this can demonstrate a key differentiating capability from those of competitors. Processes have different standardization capacities and this needs to be clearly understood when defining whether and how these services should operate through shared service centers (Gonzalez et al., 2019).

According to author of publication *Standardization as a key issue in shared service organization* (Marciniak, 2012), standardization means framework of agreements to which relevant parties in an industry or organization must adhere to ensure that all processes associated with the creation of a good or performance of a service are performed within set guidelines. This is done to ensure the end product has consistent quality. Business standardization means establishing uniform business processes across various organizational units or locations. When thinking about shared service model, following aspects should be considered, before starting (Marciniak, 2012):

- Examination of concerned services in the organization and improvement of process at the current process placement.
- Examination of possibility for economic improvement.
- Examination of IT solutions that could elevate the future improvement of process efficiency.

Organization must be able to understand how each of their processes are embedded throughout, and given their specific nature, make required decisions for those processes to operate optimally (Gonzalez et al., 2019). According to Lillrank Paul, the author of *Quality of Standard, Routine and Nonroutine Processes* (Lillrank, 2003): Perrow (1967) has classified organizations and their technologies by the number of exceptions they have to handle,

and by degree to which a search for a solution to an exception is analyzable. Organization in which there are few exceptions and problems are analyzable Perrow calls routine (typically high-volume services, with processes involving identical repetition of standardized tasks). The opposite type, nonroutine organizations, handles a lot of exceptions that are not analyzable. The concept 'routine' has been used in organization theory to describe the stability that comes from repeating the currently best-know practices (Lillrank, 2003). According to author of article: *Shared Services – Standardization, Formalization, and Control: A structured Literature Review*, by identifying trends, as well as differences, in organizing shared services in different domains — for example in terms of standardization, centralization, or control — one can nuance ideas and recommendations for future shared services and related research. Throughout the literature identified, standardization was reported as a key feature of shared services and one of the main reasons for establishing shared services in the first place. This was because it was seen as achieving many desired objectives such as maximum efficiency, customer satisfaction, and cost savings through economies of scale (Bondarouk, Friebe, 2014).

According to authors of the article: *The coming Commodization of Processes*, firms seek to standardize processes for several reasons. Standardization can facilitate communications about how the business operates, enable smooth handoffs across process boundaries, make possible comparative measures of performance, allow easier outsourcing of process capabilities. Since information systems support processes, standardization allows uniform information systems within companies as well as standard systems interfaces among different firms (Davenport, 2005). Standardization however, depends on variety of factors, such as existing IT capabilities, available standard frameworks, existent knowledge, business strategies, market situation, and competitors, as noted by authors of *Towards a framework for business process standardization (...)* (Rosenkranz et al., 2009).

3. Research methodology

3.1. Fit-gap approach and method

The fit-gap approach, used by company being subject of this study, was to identify a differences between the referential processes, represented by the Finance Operational Model, and "as is" situation, means the way the processes are conducted within the organization at the moment when fit-gap analysis was conducted. Fit-gaps were identified mainly with application of 'simulation based methods' (workshops) and 'brainstorming discussions' (Pol, Paturkar, 2011):

- Workshops: conducted between global process owners, of the: order to cash (O2C), procure to pay (P2P) and record to report (R2R) areas, the main creators of the reference model in indicated process areas, and process participants, such like accountants, team leaders and cluster leaders. During the workshops the "future state" model map of the process was compared with todays "as is" process and based on that comparison, fits and gaps were identified.

- Brainstorming discussion, were applicable during fit gap analysis, when the root cause of certain gap was discussed in order to propose solution and improvement recommendation.

As outcome of the fit gap analysis following fit-gap categories have been defined and listed in (Table 1) below.

Table 1.
Fit-Gap categories and special characteristics

Fit-Gap category/special characteristics	Category/special characteristic name	Description of the Fit-Gap category/special characteristics:
category 1	IT-1 group of gaps	IT-1 gap category is dedicated for such kind of activities, where functionalities of the existing IT tool or infrastructure leads to misalignment versus the referential model requirements, and when a small change within existing tool is required to meet the model process expectations.
category 2	IT-2 group of gaps	IT-2 gap category is dedicated for such kind of activities, where due to missing IT tool functionality or IT infrastructure, activity is performed either manually with poor quality or is not performed at all, what creates incompliance, or when a complex change within existing tool is required in order to meet the model process expectations.
category 3	Incorrect process placement	Incorrect process placement category is dedicated to such tasks or activities which are performed by a different team in a different location, than assigned by the model (for example detectable when comparing both: current process placement with future/model process placement).
category 4	Incorrect way of working	Incorrect way of working category is dedicated to such tasks or activities which are performed in a different way, in different order or incorrectly, than assigned by the model.
category 5	Full Fit	Full fit is dedicated to such tasks or activities, which are performed in line with model assignment, and fully meet model requirements (full fit means, that no gap was found in the process or activity).
Special characteristic	Compliance related gap	Compliance related gap is such sub-group of the gaps, where process compliance, understood as alignment to the internal company requirements (internal audit, risk and control matrix) is significant.

Note: Author's own research source.

3.2. Definition of process taxonomy

A process taxonomy document is a list of all processes included in the reference finance model, ordered sequentially, by a process towers of O2C, P2P and R2R, main processes and their sub-processes. Such document is defining scope of activities, being in responsibility of SSC, and structure of all conducted processes: their level, number, title, group.

Table 2 presents the example of process taxonomy list in area of 'P2P – procure to pay'. In a first column, there are numbers assigned to: process tower, main processes and sub-processes. The next few columns, from Level 1 to Level 4, are reflecting process level within process tree and containing processes names (titles). The last column contains process placement for selected country and country site, so the place (or team), where process should be run (as per referential process model). Expression "SSC" means, that process placement, as per new finance model, is assigned to shared service center (service supplier), "RO" means that process is assigned to the retained organization (service receiver).

Table 2.
Illustrative table of service catalogue & process taxonomy

No.	Level 1	Level 2	Level 3	Level 4	Process placement
1	**Procure to Pay (P2P)**				
1.1.		**Accounts Payable**			
1.1.1.				**Invoice Receive & Archive**	
1.1.1.1				Send invoice	SSC
1.1.1.2				Invoice sorting (prep. for scanning)	SSC/RO
1.1.1.3				Request digital / electronic invoice for future	SSC
1.1.1.4				Return to vendor: incomplete document	SSC
1.1.1.5				Scan document	SSC/RO
1.1.1.6				Archive hardcopy	SSC/RO
1.1.1.7				Archive Work Object	SSC
1.1.2.				**Invoice Indexing**	
1.1.2.1				Validate document	SSC
1.1.2.2				Send to proper recipient	SSC
1.1.2.3				Reclassify to 'no invoice'	SSC
1.1.2.4				Return to vendor	SSC
1.1.2.5				Reroute to proper company code operator	SSC
(…)				(…)	

SSC – Shared Service Centre (service supplier), RO – Retained Organization (service receiver).

Note: Author's own research source.

Generally, document type: "Service catalogue and process taxonomy", should list all financial processes run within the entire SSC EMEA, and is a very useful document not only for gathering all in-scope activities but also as a starting point for preparation of the documentation governance system, planning of process standardization or creation of the service agreement level, a document which defines the relationship between two parties, the nature of the services each parties provides to the other, and the measures to monitor the level of service provided against the agreed level of service (Gonzalez et al., 2019).

3.3. Design of fit-gap data collection plan

Fit-gap data collection plan, should deliver following data:

- covering the objectives of this study and delivering answer to the questions (posted in 'Introduction' chapter of this paper),

- assuring gap traceability in respect to internal document of 'Service Catalogue & process taxonomy',

- deliver a standard method of data collection, by creation of standard definition and common understanding of process level groups and gap categories.

The fit-gap data collection plan framework, presented in table 3, was designed to consolidate all above objectives and deliver following set of detailed information, and prepared in a form of an excel table.

- "Gap no." – to assure traceability and unique identification of each process gap (for example: "ES_01" corresponds to "country code_gap number within Spain country".

- "Gap size" – to estimate size of the problem, from 0 to 100% (interval: 10%), where full fit = 0%, full gap = 100%, partial gap = 50%.

- "Process tower", level -2/ -3/ -4 – to assure gap traceability and placement (1. P2P, 1.1. Accounts Payable, 1.1.2. Invoice Indexing, 1.1.2.3 Reclassify to 'no invoice').

- "Current/future process placement" – to indicate the actual and the future, process placement assigned by new finance model (for example: SSC).

- "Gap description" – to indicate what is not in line with objectives of the referential process model, represented by the Finance Operational Model, where short description of findings is put based on workshops discussion or questionnaires (for example: 1.1.2.3_there is no reclassification to 'no invoice'; process does not exist).

- "Improvement recommendations" – to propose solutions, helping minimizing the gaps (for example: change the way of working, add missing process step: reclassification to 'no invoice').

- "Gap category" – to group the gaps into categories for statistics purposes (for example: Incorrect way of working).

- "ERP/ IT tool" – to identify IT tool linked with Improvement recommendations (for example: system used for document workflow).

- "Compliance" – to indicate areas where gaps are related with internal requirements of key controls and internal audit, and were action plan creation and execution is mandatory (for example: left <empty>).

- "Heat map placement" – see detailed explanation in point 3.6 below.

Table 3.
Fit-gap data collection plan framework with examples

Column name:	Example:
Gap no.	ES_ 01
Gap size [%]	10%
Process tower	1. P2P
Level 2	1.1. Accounts payable
Level 3	1.1.2. Invoice indexing
Level 4	1.1.2.3 Reclassify to 'no invoice'
Current process placement	SSC
Future process placement	SSC
Gap description	1.1.2.3_there is no reclassification to 'no invoice'; process does not exist
Improvement recommendation	change the way of working, add missing process step: reclassification to 'no invoice'
Gap category	Incorrect way of working
ERP/ IT tool	Workflow
Compliance	<empty>
Impact on process	High
Complexity of implementation	Low

Due to limited space on the page in Table 3, columns were switched with rows.

Note: Author's own research source.

3.4. Define scope of the fit-gap analysis

Design phase of the fit-gap framework, is a good opportunity for the project team to discuss how deep and wide processes should be analyzed, and what level of details should be aimed during conduction of the fit-gap workshops. Such corrections of the approach will help with data collection method leveling and delivering of the comparable outputs. As per results of this study, the project team has proposed to limit fit-gap analysis down to the 'level 4' processes only, and Steering committee has approve it.

3.5. Improvement recommendations

Every gap found during the fit-gap analysis was considered in order to identify improvement opportunity. The future target is to align all business processes to the Finance Operational Model, thus improvement recommendations should enable realization of that objective. Majority of the improvement recommendations was already defined and listed during workshop's discussions between global process owners and workshops participants. Gap analysis contributes to improving organizational effectiveness in many different areas, categorized as "gap categories", with a special focus on IT category.

3.6. Impact on process and complexity of implementation – Heat Map placement

In addition to presented in table 3 data collection framework, two additional assessments per gap/process line were conducted.

Impact on process (graded as: low, medium, high), where:

- **LOW** – small impact on process or benefit, low priority of implementation, low gravity of gap in model, low impact on compliance.
- **MEDIUM** – medium impact on process or benefit, dependencies, medium priority of implementation, medium gaps gravity in model, big impact on compliance.
- **HIGH** – high impact on process or benefit, significant dependencies, high priority, significant gap gravity on model, significant impact on compliance.

Complexity of implementation (graded as: low, medium, high):

- **LOW** – technology exists, new activity needs to be implemented, extra workload for SSC but with low impact on resources, missing report or missing KPI.
- **MEDIUM** – technology exists, but it requires involvement from IT and their medium workload, extra workload for SSC with medium impact on resources.
- **HIGH** – new technology intro required or technology exists, but it requires significant workload and involvement of IT, extra workload for SSC and extra resources.

Both impact and complexity were used as input to process Heat Map, being helpful in navigating priorities and preparation of action plans in a form of process standardization roadmaps.

As per author of publication: Heat Map and Map Chart using TIBCO Spotfire® (Gupta, 2020), heat maps use colors to communicate numeric data by varying the underlying values. Heat maps are extremely versatile and efficient in drawing attention to trends, and it's for these reasons they have become increasingly popular within the analytics community.

In our study each zone color corresponds to change implementation complexity and has a following meaning: green: easy, yellow: moderate, red: complex change introduction:

- **Green zone** (where following combination of impact and complexity appears: high impact on process and low complexity of implementation, high impact on process and medium complexity of implementation, and medium impact on process and low complexity of implementation.
- **Yellow zone** (where following combination appears: high impact on process and high complexity of implementation, low impact on process and low complexity of implementation and medium impact on process and medium complexity of implementation.
- **Red zone** (where following combination appears: low impact on process and high complexity of implementation, low impact on process and medium complexity of implementation, medium impact on process and high complexity of implementation.

3.7. Fit-gap analysis progress tracking

Once fit-gap workshops started, teams have spent over 10 weeks, being fully dedicated to completion of the fit-gap task. The progress of fit-gap analysis was verified every week. Data for process towers and every process included in taxonomy list per country per country' site, were analyzed and tracked. The exemplary figure 1 is presenting overall weekly fit-gap process progress, after the 5th week of fit-gap analysis duration. The overall fit-gap analysis score at the time was 38% of processes reviewed.
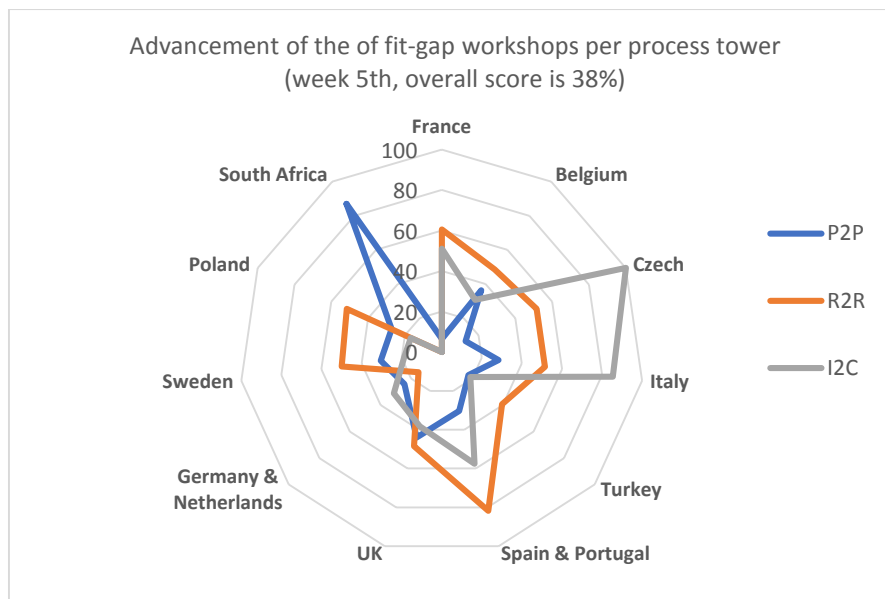

Figure 1. Tracking the progress of fit-gap workshops. Note: Author's own research source.

3.8. Process standardization roadmap

Process standardization roadmap is a document, prepared for needs of the project conducted within company being described in this study, where next to the details described in fit-gap framework (Table 3), few additional columns were added:

- Actions list (actions defined based on improvement recommendations).
- Action owner(s) (person responsible for action leading or implementation).
- Action due date (to know, when action is planned to be completed).
- Action Status (to know if it is: planned, in progress, pending, withdrawn, delayed or completed).
- Placement on Heat Map (gap impact on process and complexity of implementation).
- Gap size "after" [%] (to indicate gap size after implementation of the improvement actions).

4. Results

In order to meet objectives of this study, answers to the study's questions, set in introduction chapter, were found and presented below. The process' specific details of fit-gap analysis, conducted in the company being subject of this study, are confidential. Summary statistics are presented in this chapter.

During the fit gap analysis the total number of 4970 processes were reviewed, and 3191 gaps and 1808 fits were found, what gives total of 4999 fits & gaps. The overall result of fit-gap study can be interpreted in a different ways (Table 4, Table 5):

- as 63.8% gaps found among all fits & gaps,
- as index of 0.64 gap found in each process,
- as 41% of process non-conformance level, when taking into consideration the estimated gap size [%].

Table 4.
Fit-gap analysis summary -1

Fit-Gap analysis summary	[count]	[%]
Total number of analyzed processes	4970	na
No. of process fits and gaps	4999	100
No. of process gaps found	3191	63.8
No. of process fits found	1808	36.2

Note: Author's own research source.

Table 5.
Fit-gap analysis summary -2

Fit-Gap analysis summary	[%]
Overall estimated gaps size [%]	41
Estimated level of process conformance [%]	59
Estimated level of process non-conformance [%]	41

Note: Author's own research source.

The largest category of all fits & gaps was "Ful fit" – 36.2%, what means that tasks or process activities are performed correctly, as assigned in the model, and no corrective action at the moment is required.

The next big category of all fits & gaps was "Incorrect process placement" – 28.8%, what means that there are 28.8% of tasks or activities which are performed by a different team in a different location, than assigned by the model, for example are performed by retained organization and not by shared service or by shared service and not by retained. As a future corrective action, transfer of some activities between RO and SSC will need to be considered.

Both IT categories: IT-1, where small change on existing tool is required and IT-2, where bigger change on existing tool or introduction of new tool is required, are consuming in total 19.5%, where smaller IT changes takes 7.9% and bigger takes 11.6%.

The last group is "Incorrect way of working" – 15.6%, what means that 15.6% of tasks or activities are performed in a different way, in a different order or incorrectly, than assigned by the model, and for example instead of double control we have in place only single controls or instead of double monthly reconciliation, only single reconciliation is performed. As a future corrective action, process change or change the way of working needs to be implemented.

See results enclosed in table 6.

Table 6.
Fit-gap categories split

Fit-Gap categories	Sum [count]	Sum [%]
Full Fit	1808	36.2
Incorrect process placement	1438	28.8
Incorrect way of working	779	15.6
IT-2 group of gaps	580	11.6
IT-1 group of gaps	394	7.9
Total:	**4999**	**100**

Note: Author's own research source.

When analyzing all gap categories per process tower, as per table 7 below, we can conclude, that the biggest number of gaps (excluding process fits) have been identified in Procure to Pay area (P2P) – total of 1423 gaps, in Order to Cash area (O2C) 979 gaps have been found, and for Record to Report (R2R) 789 gaps have been found.

Table 7.
Fit-gap categories split per process tower

Fit - Gap categories	O2C	P2P	R2R	Total [count]	Total [%]
IT-1 – exis ting tool/small change	128	249	17	394	**7.9**
IT-2 – not existing tool/big change	27	347	206	580	**11.6**
Full fit	*956*	*419*	*433*	*1808*	*36.2*
Incorrect way of working	133	385	261	779	**15.6**
Incorrect process placement	691	442	305	1438	**28.8**
Total [count]	1935	1842	1222	4999	**100**
Total [%]	**38.7**	**36.8**	**24.4**	**100**	**-**

Note: Author's own research source.

As presented in figure 2, the largest gap group of 24% belongs to "Incorrect process placement", 23% of processes full fit to the referential model, 21% are assigned to category of "Incorrect way of working", and 32% of activities belong to IT category, where: 19% is IT-2 – not existing tool. Big change, and 13% IT-1 – existing tool/ small change.
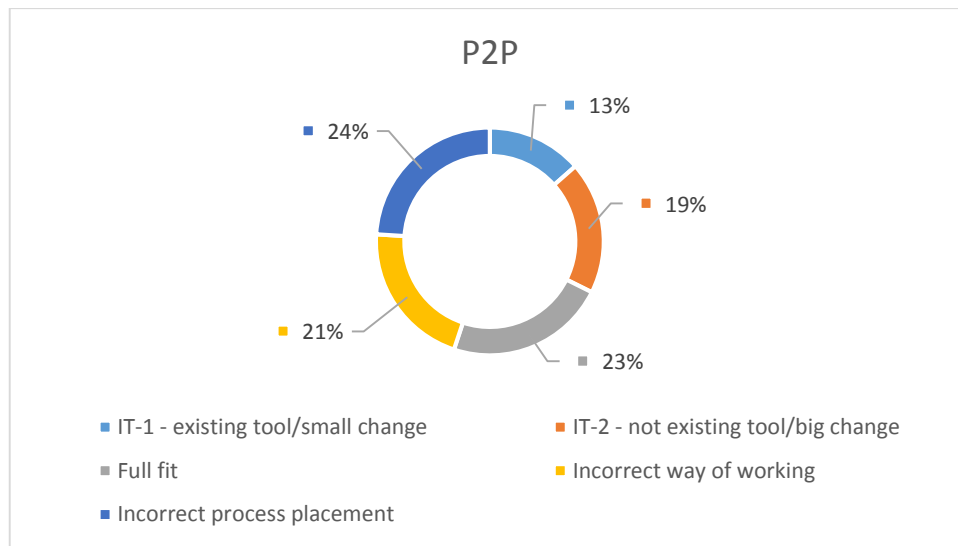
Figure 2. Fit-Gap categories in P2P process tower. Note: Author's own research source.

As presented in figure 3, in O2C process tower, the largest gap group of 49% belongs to processes full fit to the referential model, 36% of activities are assigned to category of "Incorrect process placement", 7% belongs to "Incorrect way of working", and 8% were assigned to IT category, where: 1% is IT-2 – not existing tool and 7% belongs to IT-1 – existing tool/small change.
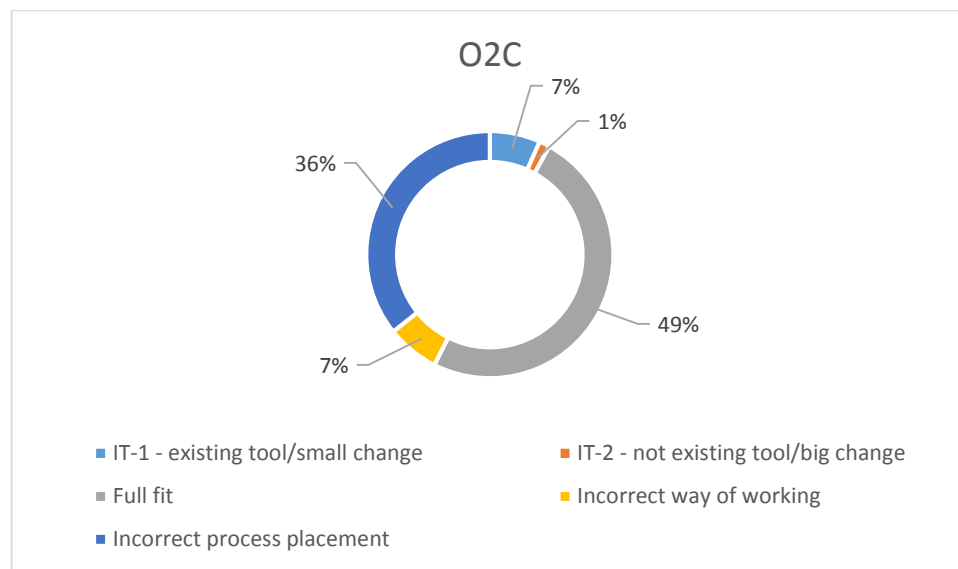

Figure 3. Fit-Gap categories in O2C process tower. Note: Author's own research source.

As presented in figure 4, in R2R process tower, the largest gap group of 36% belongs to processes full fit to the referential model, 25% of activities are assigned to category of "Incorrect process placement", 21% belongs to "Incorrect way of working", and 18% were assigned to IT category, where: 17% is IT-2 – not existing tool and 1% belongs to IT-1 – existing tool/small change.
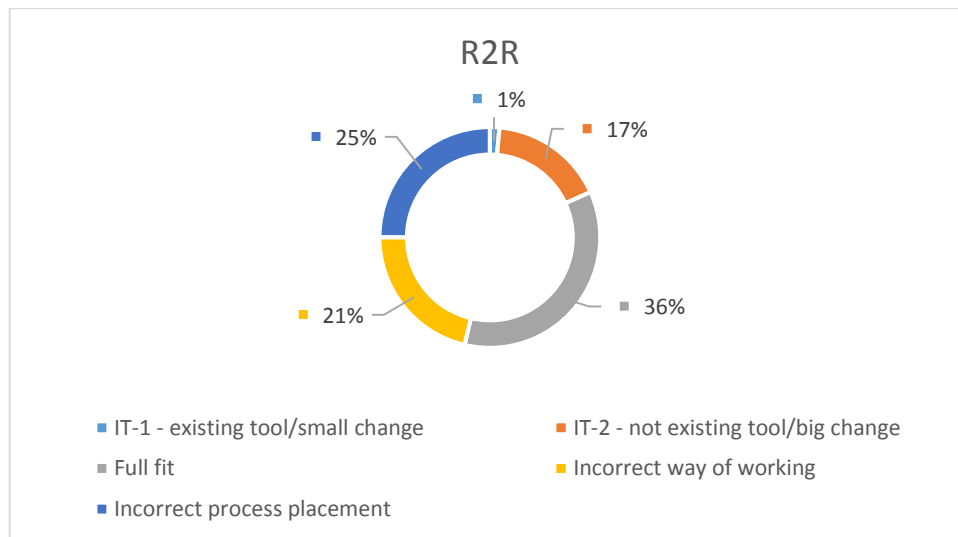
Figure 4. Fit-Gap categories in R2R process tower. Note: Author's own research source.

The overall conclusion of Fit-gap categories split per process tower is, that the largest amount of IT related gaps are appearing in process towers of P2P and R2R. The "Incorrect process placement", takes more than a quarter of all processes in all process towers, but O2C has the largest amount of process placement issues. Incorrect way of working playing a big part in P2P and R2R and is in minority for O2C.

In order to prioritize improvement actions, all gaps categories were additionally assessed vs. gap impact on business process and complexity of improvement action implementation. Results of the heat map placement study for IT category is presented in table 8 below.

Table 8.

Heat map zones for IT category

IT category "heat zones"	Impact vs Complexity	IT-1 – existing tool/ small change	IT-2 – not existing tool/ big change	Total IT category [count]	Total IT category [%]
GREEN ZONE	High impact vs. Low complexity	18	0	**276**	**26.7**
	High impact vs. Medium complexity	185	10		
	Medium impact vs. Low complexity	47	16		
YELLOW ZONE	High impact vs. High complexity	1	231	**293**	**28.3**
	Low impact vs. Low complexity	3	0		
	Medium impact vs. Medium complexity	58	0		
RED ZONE	Low impact vs. High complexity	1	0	**465**	**45**
	Low impact vs. Medium complexity	82	3		
	Medium impact vs. High complexity	3	376		
All zones	**Total [count]**	**398**	**636**	1034	-
	Total [%]	**38.5**	**61.5**	**100**	**100**

Note: Author's own research source.

Changes required in IT technology area and their placement on Heat Map, are presented above (Table 8, Figure 5). Heat map placement is created based on two dimensions: impact of on business process and complexity of change implementation and assumptions listed in chapter 3.6. above. Generally, there are more complex IT changes– 45% allocated to red zone, than the easy one changes – 28.3% in yellow zone, and 26.7% in green zone (Table 8).
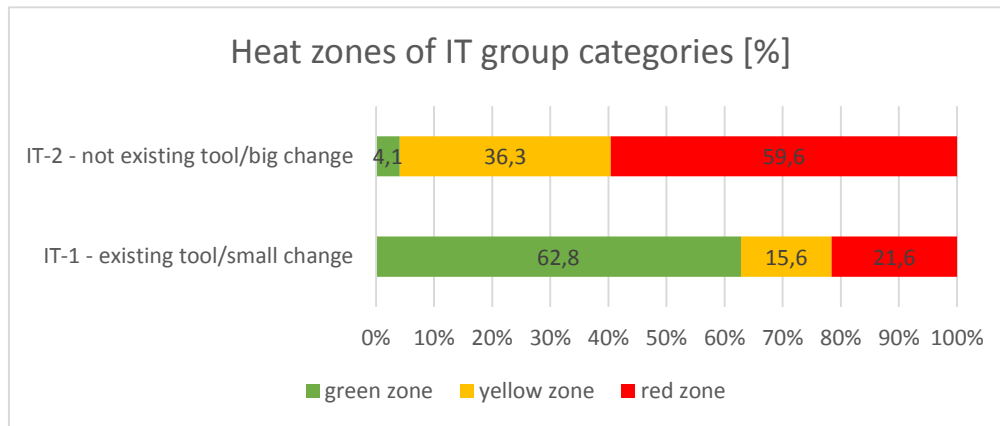

Figure 5. Heat zones for IT category in [%]. Note: Author's own research source.

Based on the study data (Figure 5), we can conclude, that 62.8% of changes in IT-1 gap category (small change on existing tool required) are allocated to green zone, where there are: high impact on process and low or medium complexity of implementation, or medium impact on process and low complexity of implementation. 21.6% are within red zone, where there are: low impact and high or medium complexity or medium impact and high complexity. 15.6% are allocated to yellow zone (with high-high, low-low and medium-medium impact vs. complexity). In reference to IT-2 gap category, where new tool introduction or big change in existing tool is required, majority of 59.6% of gaps are allocated to red zone, and 36.3% to yellow zone and 4.1% to green zone of the heat map.

Table 9.

Compliance related gaps per gaps category

Fit - Gap categories	Total number of 'compliance related gaps' [count]	Total [%]
IT-1 – existing tool/small change	107	**12.2**
IT-2 – not existing tool/big change	171	**19.5**
Full fit	0	**0**
Incorrect way of working	515	**58.7**
Incorrect process placement	84	**9.6**
Total [count]	877	**100**
Total [%]	**100**	**-**

Note: Author's own research source.

In table 9 above, there is distribution of compliance related gaps within gaps categories. The largest number of incompliance was detected in gap category "Incorrect way of working". Within IT category, there are 31.7% of all compliance related gaps, 19.5% within IT-2 and 12.2% within IT-1 category. In general, when comparing number of all process gaps – 3191 with number of all 'compliance related gaps' – 877, we can say, that 27.5% of process gaps are impacting compliance.

5. Conclusions

Based on data collected during fit-gap analysis of the exemplary Shared Service Centre of EMEA, among all reviewed process 63.8% of gaps and 36.2% of fits were identified. In general the amount of actions, which needs to be planned and implemented in order to meet the requirements of the new Finance Operational Model need to cover 3191 different gaps. Improvement actions are mandatory for 27.5% (877) of all identified gaps, due to their relations with compliance and internal requirements. It is already visible, that involvement of the entire organization in this complex change is required, as 28.8% of activities will require transition from one place/location to another, 19.5% of activities will require improvement of IT infrastructure and technology, including automatization, and 15.6% of activities will require changes in the way of working or some process changes.

As per presented results, fit-gap analysis was considered as adequate tool for diagnosis of process alignment to the referential finance model, and it has delivered satisfactory and very detailed performance overview of the SSC organization. The company being subject of this study, is one global organization, which historically grew up by acquisition of individual manufacturing entities of different EMEA countries, with their unique technology & IT infrastructure. Today's organization attempts to manage multiple ERP systems, such like: SAP: A1/B1, JDE: XE/World/One, sometimes applied under different revision number, and in addition many 'country specific' IT tools. Currently company uses: 4 different ERPs, minimum 13 other IT tools, and 1 newly implemented ERP, within a pilot country. Integration of financial model requirements with such an amount of IT tools is very complex, diverse and time consuming. As per table 10 and results of conducted fit-gap analysis, 50.2% of improvement actions will require upgrade of ERP' functionalities, 44.5% are allocated to systems used as document workflows, enabling to count volumes, track status of financial processes, and 5.4% improvements actions are expected from tools, which are used for maintenance of data or as data import/exports portals (between internal reporting systems, banks or ERPs via cubes).

Table 10.
IT tools requiring improvement

IT tools	No. of the improvement opportunities	[%] of the improvement opportunities
ERP	571	50.2
Non-ERP tool (documents workflow)	506	44.5
Data exchange tools	61	5.4
Total	**1138**	**100**

Note: Author's own research source.

Majority of improvement actions defined to minimize number and size of identified gaps, will for sure enable to align business processes to the requirements of the Finance Operational Model, but there are also some individual cases, where current practices will have to be accepted "as they are". For example: according to the model, when mismatch between invoice and purchase order is found during already started invoice booking process, process is stopped and put on-hold, until goods receipt action will confirm: the real number of delivered goods/service, the price and the fact of delivery. As for 'today', in some countries existing ERP systems do not support such a process sequence, so changed process order will need to be accepted, until future ERP system upgrade, and once installed functionality will enable investigation of goods receipts prior to process of invoice booking.

Next steps need to focus on preparation of the detailed action plans, setting priorities and process standardization level objectives, what could be next research objective and continuation of this study.

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