End to End volume analytics for uncovering the broader resource optimization

Chiranjeevi Hanumantharayappa

Abstract— In Recent days, financial organizations are primarily focusing on utilizing workforce data and information to align staffing across functions to enable the delivery of optimum results, identify opportunities to improve resource optimization and reduce overall labor costs. Agility is particularly important in an increasingly volatile business environment characterized by intense, global competition and time-sensitive customer demand. It's an ability of an organization to be nimble and adapt to changes in cost-effective ways. The purpose of this paper is to uncover the synergies across channel/sources of transactions and also products/functions using Tableau visualization dashboard (Sankey Diagram) which will enable to identify the new opportunities for optimization. Moving to an E2E perspective will enable agility and new scale (Transactions per Associate) opportunities and helps to identify the work that could have been prevented

Index Terms— Agility, E2E, Channel, Resource Optimization, Sankey, Transaction, Volume.

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1 Introduction

While organizations focusing on optimizing the resources by various methods such as volume reduction through automation, process re-engineering etc.... However, Pockets of available capacity exist within the functions or sub team's leading them to run with tight staffing margins. So the question is how we leverage this capacity for effective resource alignment. A multifaceted approach is required to enable scale.

One approach is to look at the transactions from an E2E perspective. Financial industries receive the volume through various sources(S) like Mail, phone, web portal etc.....and these transactions distributed to various functions (Func.) and get resolved... many of these transactions may get generated internally again within the organization leading to the re-work and requires additional manpower.

Therefore, it's important to understand why and how these transactions are getting generated, is there way to prevent the work and look for agility for better alignment of resource across the functions

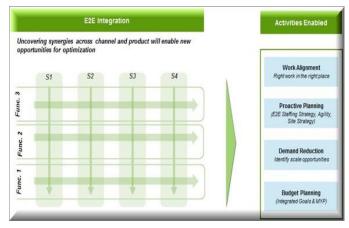


Figure 1: E2E Staffing strategies across functions by sources

2 Mapping the transactions by source and DESTINATION OF THE WORK

It's important to identify the source and also the type of transactions through which the work is entering into an organization and also destination/ function (Teams resolving the work)

- Collect one year worth of data for any product for all the functions
- Identify the source by entry nodes
- Based on the associate resolving the work, map the function
- Identify the what % each source contributes to the overall volume
- Identify the what % each function contributes to the overall resolved volume
- Identify the major transactions(T) driving more volume (80-20 rule) for each source (Ex: S1-T1, S1-T3, S1-T6, S1-T9 for source S1)
- Identify the major transactions(T) driving more volume (80-20 rule) for each function (Ex: Func. 1–T1, Func. 1–T10, Func. 1–T9, Func. 1–T6 for function func.1)
- It's also important to know what % volume that each team receives from each of the source. This will help us to drill down further to identify the major transactions to tackle as depicted in Figure 3.

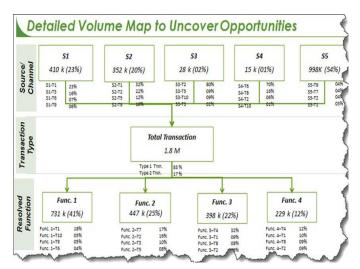


Figure 2: Volume Map by multiple Sources to multiple Functions

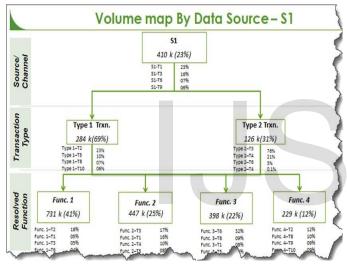


Figure 3: Volume Map by one Source to multiple functions

3 SANKEY DIAGRAM TO SHOW VOLUME DISTRIBUTION ACROSS CHANNELS AND FUNCTIONS

As discussed in the previous section, N numbers of transactions enter into an organization through various channels and get resolved by various functions within the organization.

A Sankey diagram is a visualization tool used to depict a flow from one set of values to another. The things being connected are called nodes and the connections are called links. Sankey's are best used when you want to show a many-to-many mapping between two or more domains or multiple paths through a set of stages (for instance, Google Analytics uses Sankey's to show how traffic flows from pages to other pages on web site).

A Sankey Diagram in figure 4 created using the Tableau visualization tool shows the volume distributions from various channels to functions. The four

bar columns Level 0 represents the sources/channel; Level1-Transaction Type; Level2-Function resolving the transactions and Level 3 represents the top transactions driving more volume. pages to other pages on web site). The width of the arrows is proportional to the quantity of the volume. As we can see in figure 4, S5 is the highest volume generated source and Func1.resolving 40% of the overall transactions. This chart helps us to easily identify what % volume generate through each source and split of transaction type, functions resolving the items coming through different sources. The filters on the right-hand side gives us the ability to filter by each source, function etc. Figure 5 depicts the volume flow for S1 separately

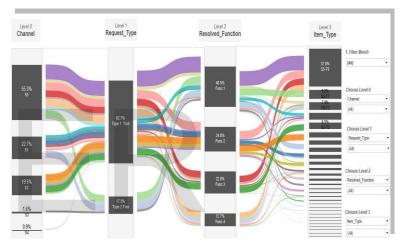


Figure 4: Sankey Diagram showing the volume flow from multiple channels to multiple functions

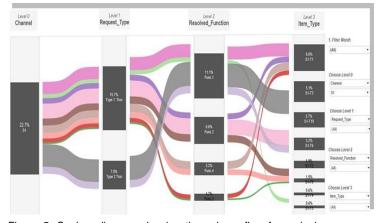


Figure 5: Sankey diagram showing the volume flow from single source (S1) to multiple functions

4 RESOURCE OPTIMIZATION

As we now have the fair understanding of volume, now it's a question of how do we make use of these dashboards for volume reduction and resource optimization? This can be classified as 3 categories as shown in figure 6.

4.1 Preventing the work

- Identify low-value work transactions that could have been prevented
- Proactively send/collect information to downstream/upstream functions
- Remove technology or process barriers that result in work transfer
- Opportunities to stop the transactions proactively before entering into an organization

4.2 Automating processes

- Breaking down frequent transactions into their automatable and nonautomatable components
- Collaboration with operations and technology teams to streamline and automate manual processes

4.3 Building agility across functions

- Identifying work items that can be trained and moved from one team to another
- Forecasting the volumes and FTE requirements of those items
- Leveraging discretionary capacity opportunities across both teams, as needed

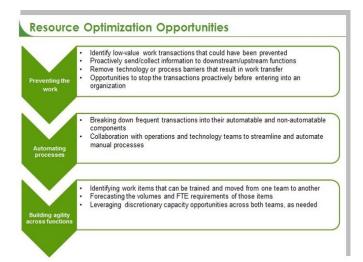


Figure 6: Resource Optimization Opportunities

5 Cross-function agility

Let's assume Source 1 (which is also function 1 in this case) handles the phone calls of all the customers and which would intern generate the transactions which flows to function 2. Now, these 2 functions are interconnected, there is a great opportunity to flex the resource across the teams.

5.1 Develop the demand pattern for both the function

- Classify call types and work items into high / medium / low velocity types, based on handle time / time standards
- Forecast the work velocity profile for future months to understand when simpler inquiries will need more resources

5.2 Develop the Supply pattern for both the function

- Superimpose the discretionary capacity(Gap between the supply Vs demand) for both function to understand when the agility is needed the most
- Adjust hiring plans as needed, so that the trained agents could be leveraged appropriately

5.3 Implementation

As we can see in figure 7, S1 or func.1 has a positive discretion in Q2 and can leverage these resources to func.2, similarly func.2 has positive discretionary in Q3 and flex these resources to func.1.

- Drill-down into further opportunities at a more granular level by client team and time periods
- Set up training programs specific to the simple queries expected in each agility window

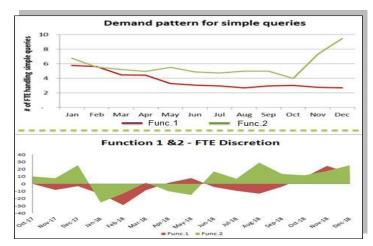


Figure 7: Demand pattern for functions 1& 2 and discretionary (Gap between Supply Vs Demand) capacity

6 CONCLUSION

As the topic of this whitepaper says (E2E), the success of this idea requires greater collaboration between the functions and also the deeper domain knowledge and should be treated as continuous improvement project

DISCLAIMER

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REFERENCES

- [1] Workforce optimization, Wikipedia; https://en.wikipedia.org/wiki/Workforce_optimization
- [2] Cross-Training techniques from Area Development; http://www.areadevelopment.com/laborEducation/Q1-2013/implementing-cross-training-hot-back-ups-37372612.shtml
- [3] Resource plans for lending and borrowing from IBM Knowledge Center; https://www.ibm.com/support/knowledgecenter/SSZUMP_7.2.0/manag ement_sym/resource_ownership_policies_create.html
- [4] Sankey Charts in Tableau, The Information lab; https://www.theinformationlab.co.uk/2015/03/04/sankey-charts-intableau/

