

A Study On Assessing The Turn Around Time (TAT) And Identifying Non-value Added Activities Of Retail Underwriting Process at ABHICL.

Akanksha Jambusaria

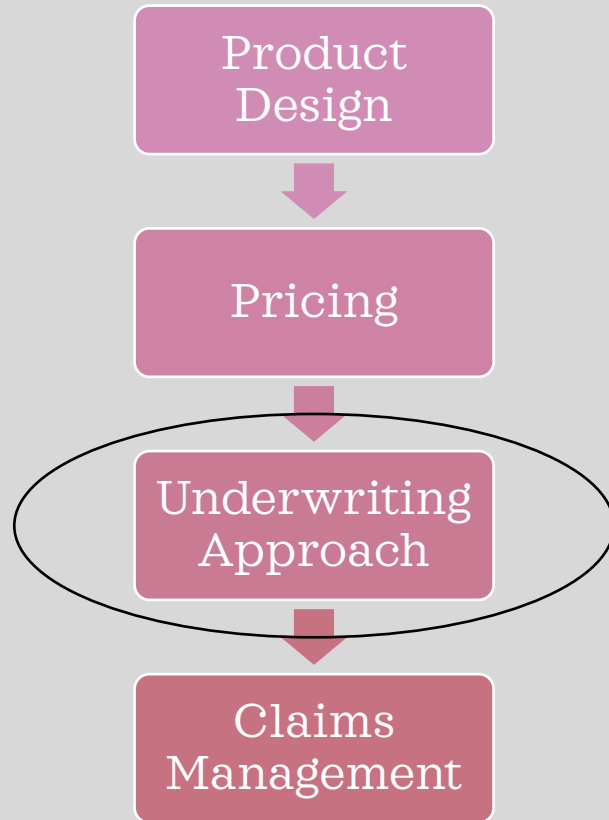
MBA HM Health 23

0707

Introduction

- Insurance seeks to provide financial protection to the insured in case of unfortunate events resulting in loss of assets, property, income earnings and even life. Insurance sector in India is broadly divided into: **Life insurance and Non-life insurance**. Non-life insurance is also termed as General insurance, and both are governed by the **Insurance Regulatory & Development Authority of India (IRDAI)**.
- **Health insurance** is the type of non-life insurance that deals with morbidity, meaning the type of insurance coverage that pays for medical and surgical expenses. **It is relatively less well established in India as compared to many other countries**, yet health insurance industry in India is the fastest growing segment in the non-life insurance sector.
- The out of pocket health expenditure in India remains high, with only 1.5-2 % covered by insurance providers.

Introduction



Types of
risks

1. Preferred
risk

2. Standard
risk

3.
Substandard
risk

Life Cycle Of An Insurance
Product

Underwriting

- Insurance underwriters evaluate the risk and exposures of potential clients.
- Each insurance company has its own set of underwriting guidelines to help the underwriter determine whether or not the company should accept the risk.
- The information used to evaluate the risk of an applicant for insurance will depend on the type of plan and coverage involved.

Principles of UW

- Equity & fairness
- Product pricing & claim management
- Regulatory and legal compliance
- Consistency
- Risk Evaluation
- Risk Classification
- Balancing convenience, cost and effectiveness
- Intelligent use of rating variable

Types of UW:

- Medical underwriting
- Financial underwriting
- Field underwriting
- Tele underwriting

Source: Basics of Health Insurance IC-35, Chapter 4 Health Insurance and Underwriting Principles. p 113, 14.

Literature Review

Author	Title	Overview
S. Mkrtychev, O. Enik	Automated Underwriting Control in a Regional Insurance Company	• Underwriting is one of the key business processes of the insurance company operational activities. • Underwriting is the only operational business process of insurance activities, where the human factor still has a great impact on the accuracy of risks identification and decision-making as to whether accept or reject an insurance application from a potential client . • One of the obvious ways to increase the effectiveness of the underwriting process is to organize its automated control. • Suggested underwriting scale. • Authors propose an approach to the implementation of automated underwriting control in a regional insurance company based on combined decision-making carried out by the underwriting management information system (UMIS) and a human underwriter. • The use of the automated underwriting control solution built on the basis of the proposed approach in the insurance company ensured a reduction in the loss ratio for some types of voluntary non-life insurance by 28% .

Literature Review

Christopher M.
Murtaugh, Peter
Kemper and
Brenda C.
Spillman

Risky Business:
Long-Term Care
Insurance
Underwriting

- Insurers typically respond to the problem of adverse selection by underwriting.
- By collecting information at the time of applying, insurers attempt to mitigate the irregularity of information between the applicants and insurers concerning expected claims.
- The actual underwriting process begins with the completion of an application form.
- The first stage, the application checklist is used to screen applicants.
- Those who pass this screen go on to a second stage in the underwriting process for detailed medical information of the proposer.
- Long-term care insurance underwriting criteria identify individuals who vary substantially in the financial risk they pose to insurers.

Operational Definitions

- **Turn Around Time (TAT)** refers to time taken for a case to be processed from the time an UW logs in the case to the time a decision is given in the system,
- **Value Added Activities** refer to those that fulfil the following three criteria:
 - ✓ The step **transforms** the item towards completion.
 - ✓ The step is done **right the first time** (no rework).
 - ✓ Customer **would pay** for the step to be done.
- **Non Value Added Activities** (NVAA) are those that fail to meet any one or more of the above criteria or in other words actions that **do not increase the worth** of what is delivered to the customer.

Rationale

- Identifying Non Value added activities will help to manage or eliminate them.
- Help to eliminate avoidable activities such that process efficiency can be improved.
- Furthermore it will help to reduce the time to process a case from the time it reaches the UW bucket to the time a decision is made and case is moved further.

Research Question

- Which are the Non-Value Added activities associated with the underwriting process of the company and how do they affect the process?

Objectives

- To map the retail underwriting process (production).
- To identify the value and non-value added activities in the existing retail underwriting process.

Methodology

- First part of the study comprised of observation of the process by shadowing underwriters on daily basis.
- Followed by noting down the observed challenges in the process.
- The second half of the study included quantifying the challenges.
- Study Type: Descriptive Cross Sectional
- Data type: Primary
- Tool: Checklist
- Samples: 203
- Time period for data collection: Three weeks
- Data collection: Live online shadowing of underwriters via screen sharing.
- Sampling method: Convenience sampling (subject to availability of cases and UWs)

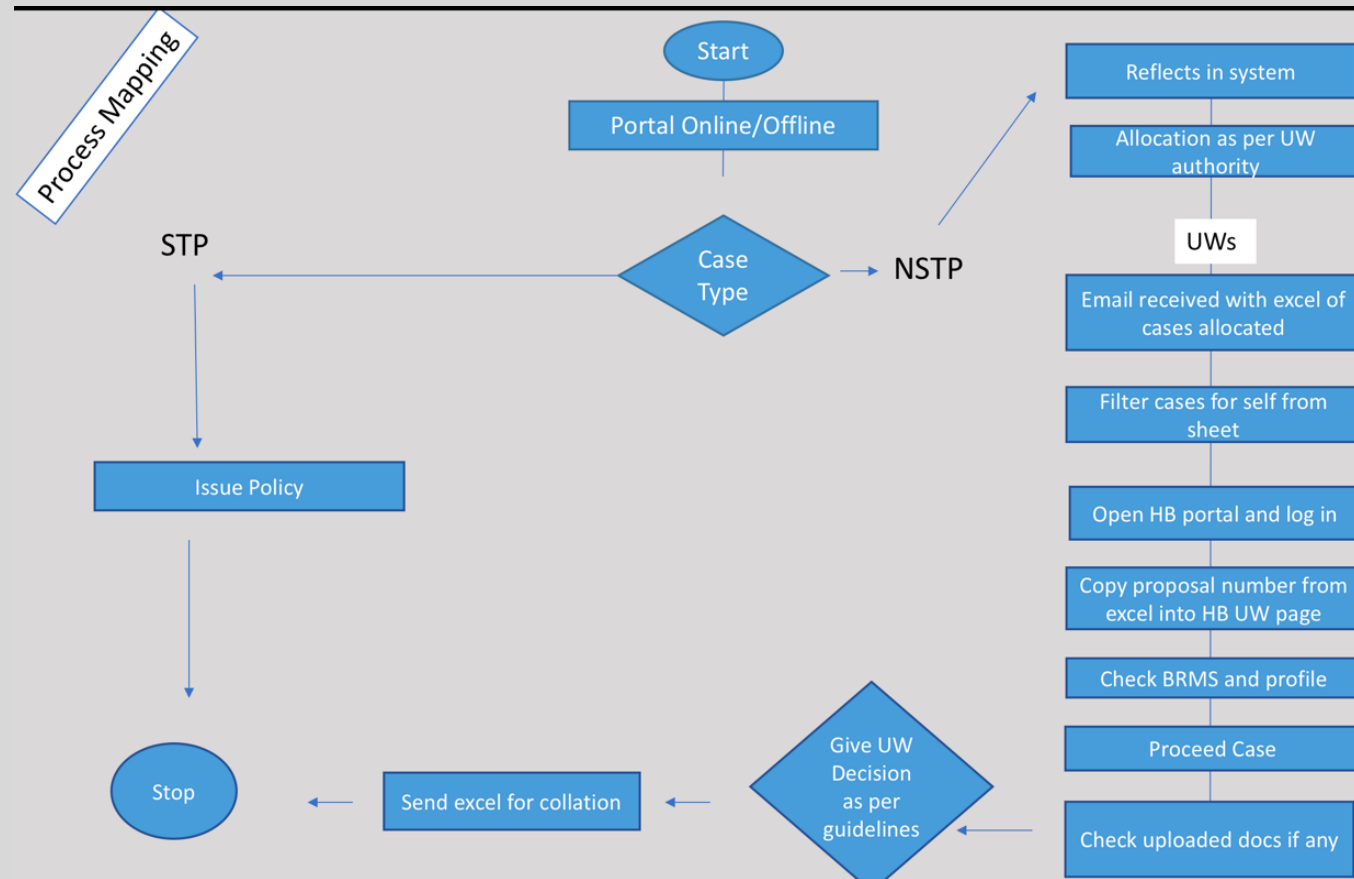
Non Value Added Activities Criteria

- Activities have been identified as Non Value added activities as per following criteria:
- Don't contribute to decision making.
- Repetitive actions/steps: repeating a step more than once.
- Causing system lag of over 30 seconds.
- Activities that prevent UW from moving to next step.

Limitations

- Due to COVID situation, TAT for PPMC cases was calculated based on past data.
- Majority of the study was conducted in work from home environment.
- Certain processing skills of UW are subjective and differ from one UW to another. Such subjective skill were beyond the scope of the study but may have had confounding effect.
- Certain UW remained unavailable for study on technical grounds.
- Complexity of cases differ from each other however for the ease of interpretation, it can be assumed that the effect may have been nullified over the samples.

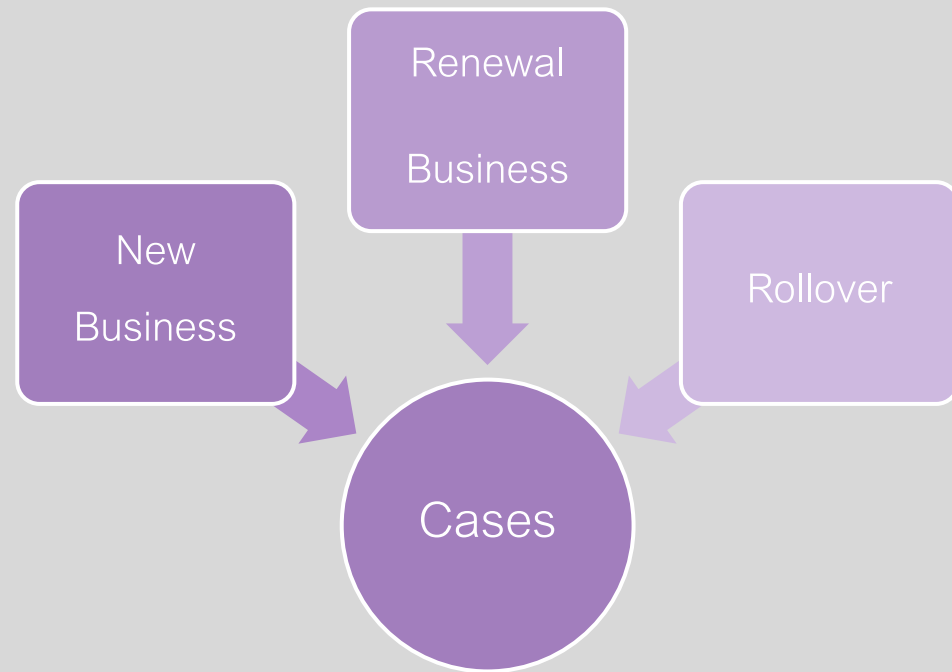
Results – Process flow



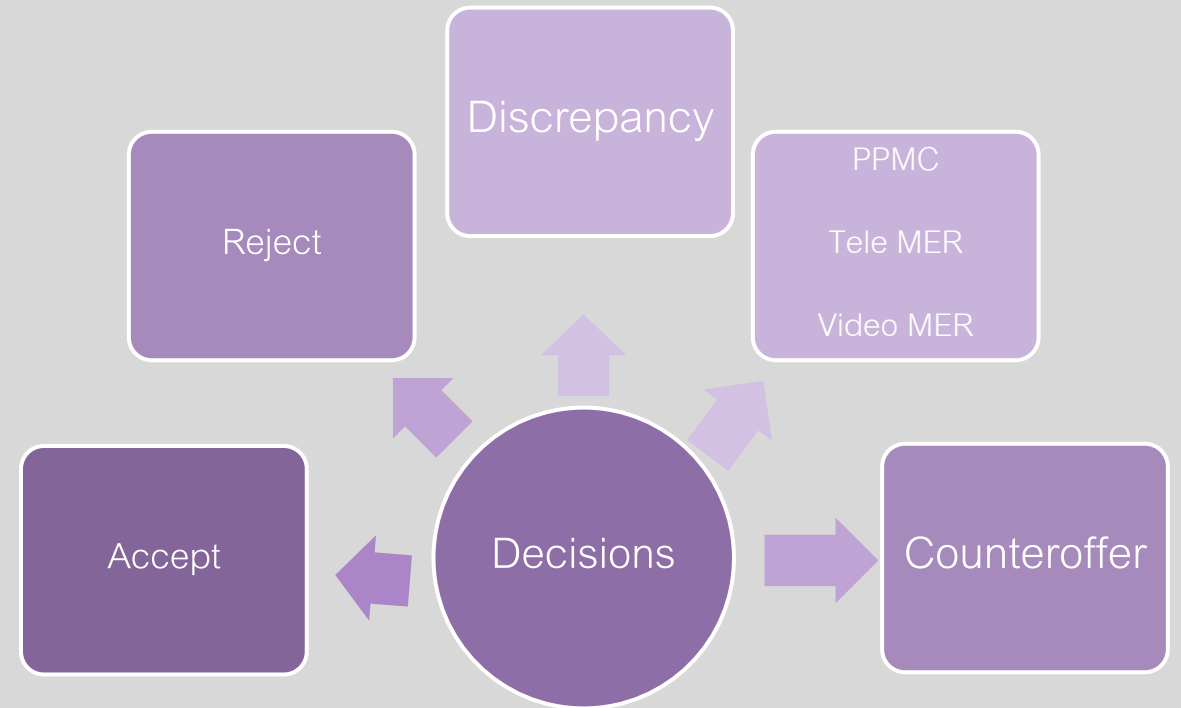
Process mapping

- Cases may **be Straight through pass (STP) or Non Straight through pass (NSTP)**.
- Cases that are **STP** do not require Underwriting, they are those cases wherein the proposer doesn't disclose any health declaration or personal habits and the sum insured and age also are within acceptable limits.
- **NSTP** cases are those that are referred for underwriting. This include cases wherein the age, sum insured require underwriting consideration and/or when the proposer has disclosed some health issues or personal habits in the proposal form.

Business Type



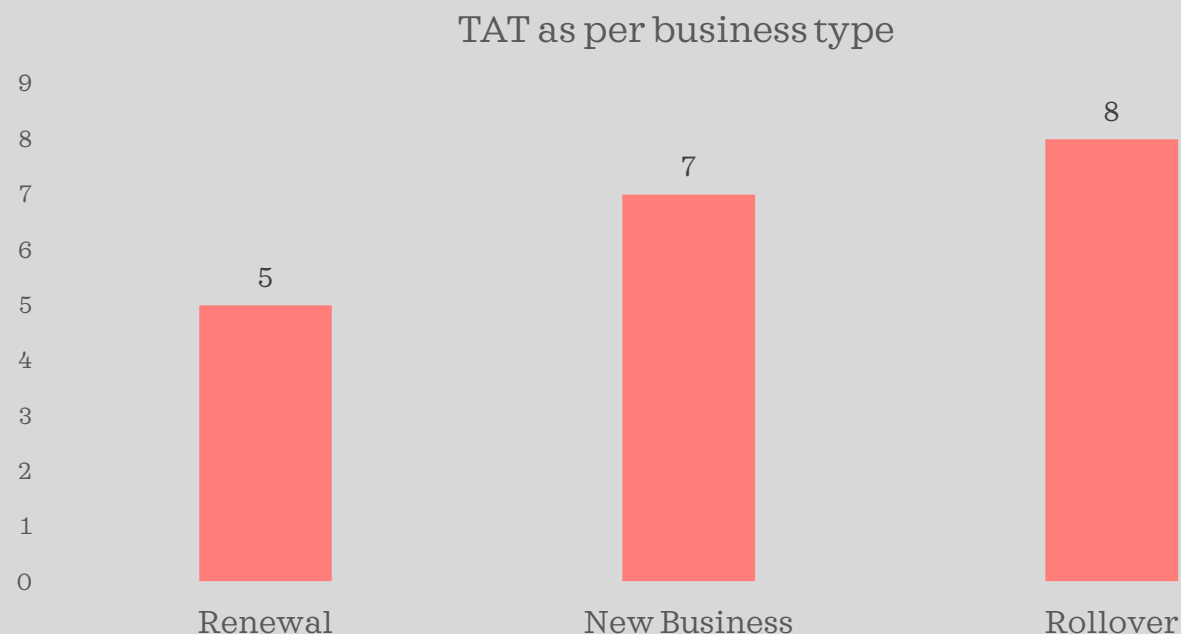
Various UW Decisions



Data Analysis

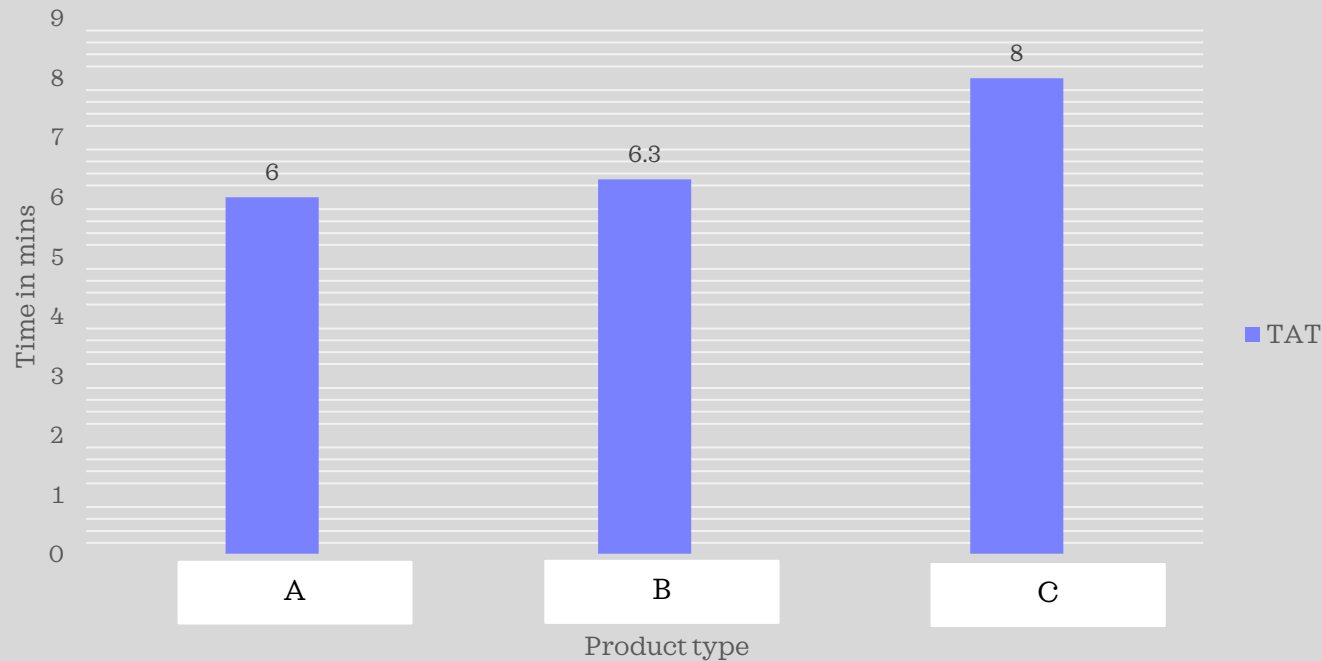
- The average TAT of the process was found to be **6.5 minutes/case** irrespective of the type of product, UW experience and skill, (excluding PPMC cases) based on 203 primary samples.

TAT as per Business Type



- Renewal business cases take approx. 2 mins lesser time than new business cases.
- Rollover cases take about a minute more than new business cases.
- Rollover policies include steps like checking previous policy, inception date, portability benefit, type of policy being rolled over(group/retail), members covered, PED applicable, existing SI, h/o claim taken and role of occupation.

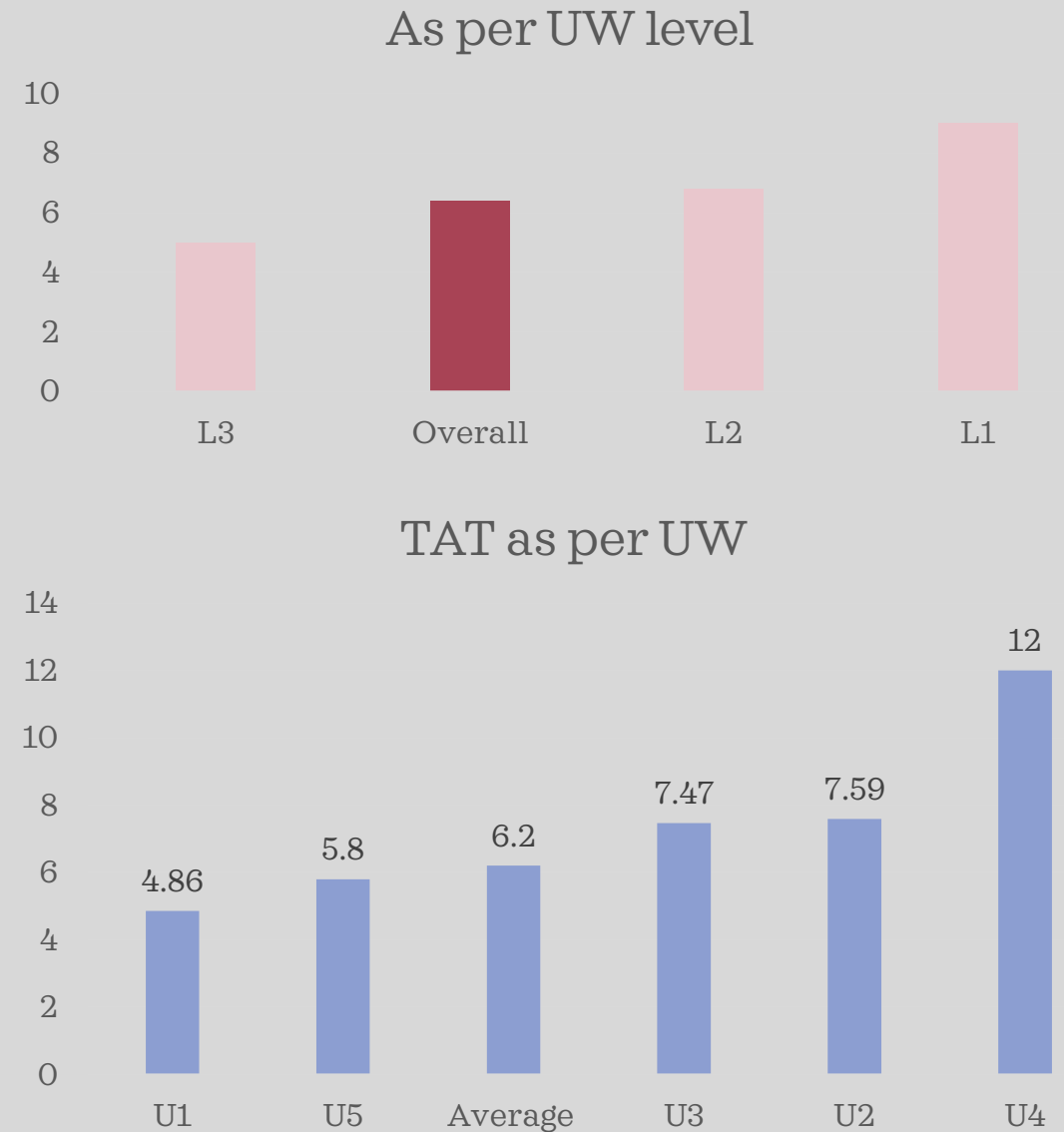
TAT by Product



- The most popular products of the company were compared with the overall average TAT.
- It was found that a particular product C took longer than average to process.
- The average overall TAT was found to be 6.5 minutes however the TAT of product C was found to be 7 minutes, i.e. 30 seconds more than average.
- This increase in time can be attributed to the additional steps of financial underwriting associated with this particular product.

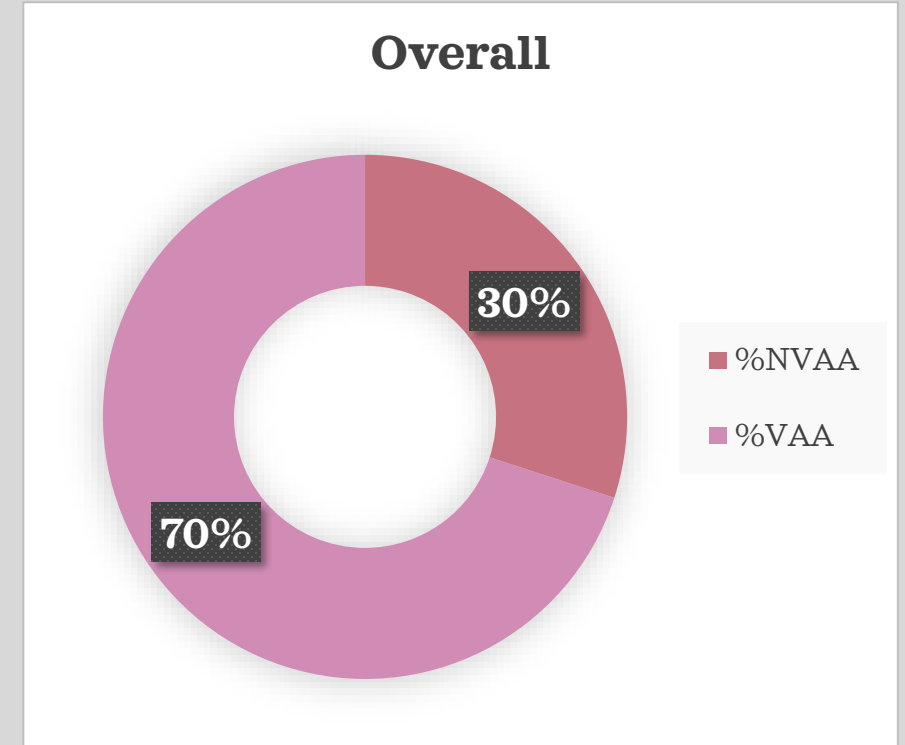
Variation in TAT as per UW and UW authority level

- Factors affecting TAT wrt UW and authority level-
 - Experience
 - Acquaintance with system
 - Typing skill
 - Approach
 - Complexity of case
 - Other external factors (Laptop, environment)
- Senior UW may be able to dodge effects of NVA better than mid and junior level UW
- Dynamic allocation of cases based on efficiency of UW can be looked into.

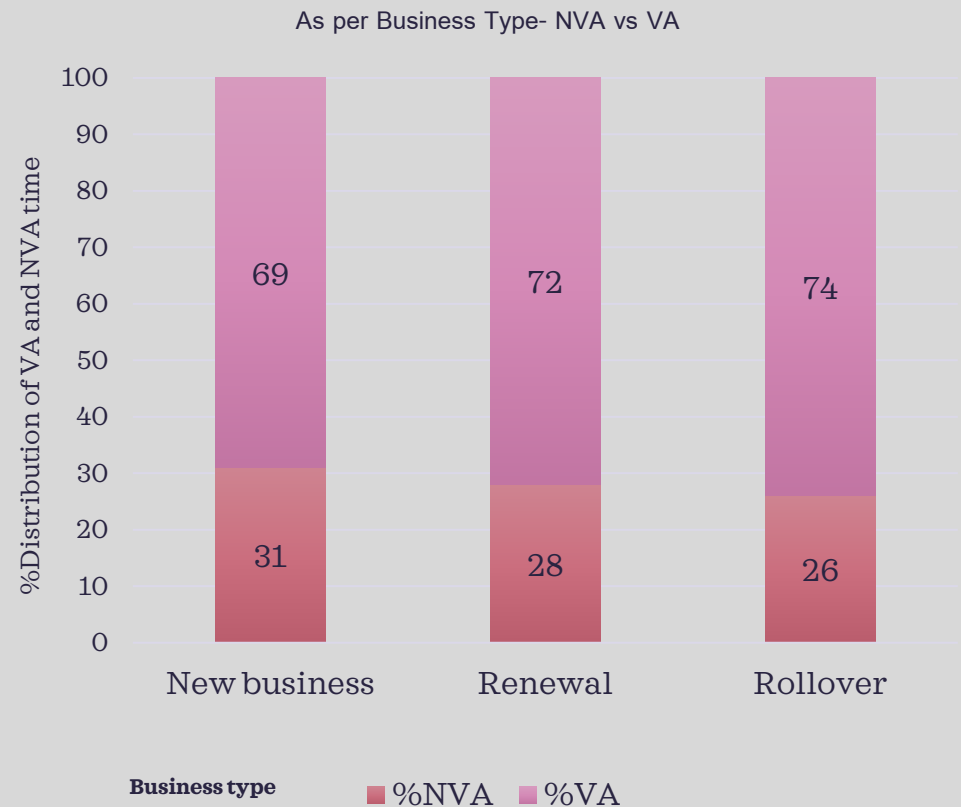
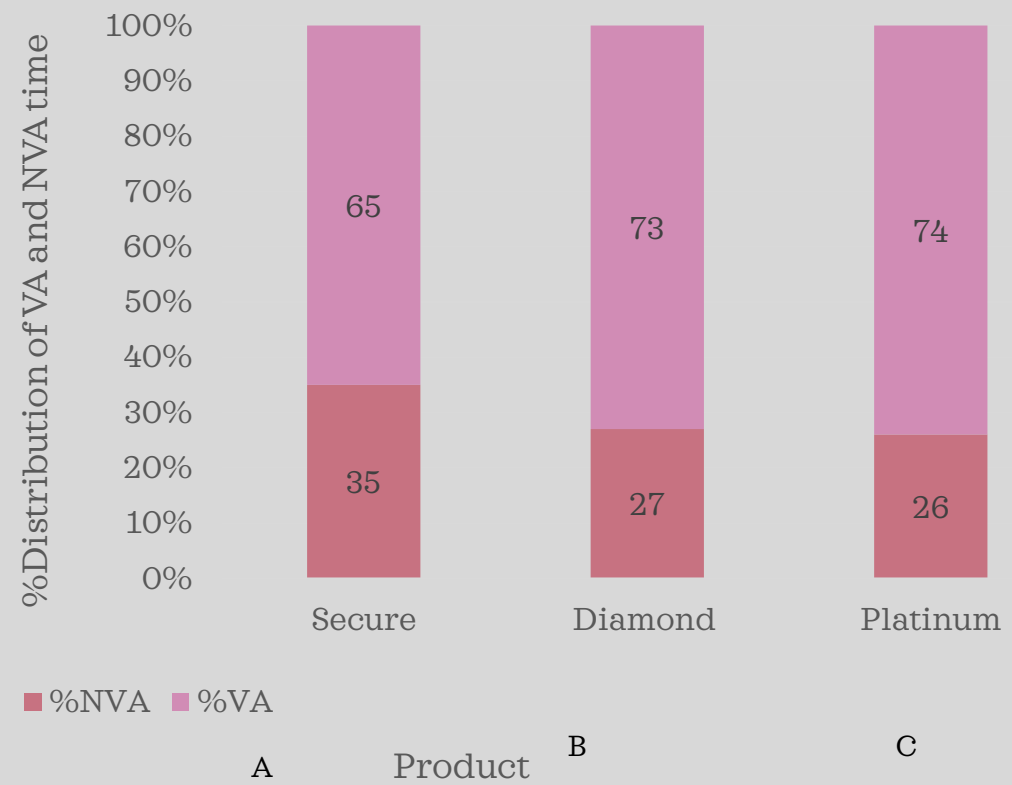


Non Value Added Activities

- NVA Activities can be divided into **IT and Non IT issues.**
- Both together were found to contribute to **30%** of the whole process.
- In a sample size of 203 cases, total NVA time was about **2 minutes per case.**
- Hence if both the IT and Non IT issues are resolved, TAT can be reduced to about 5 minutes per case.



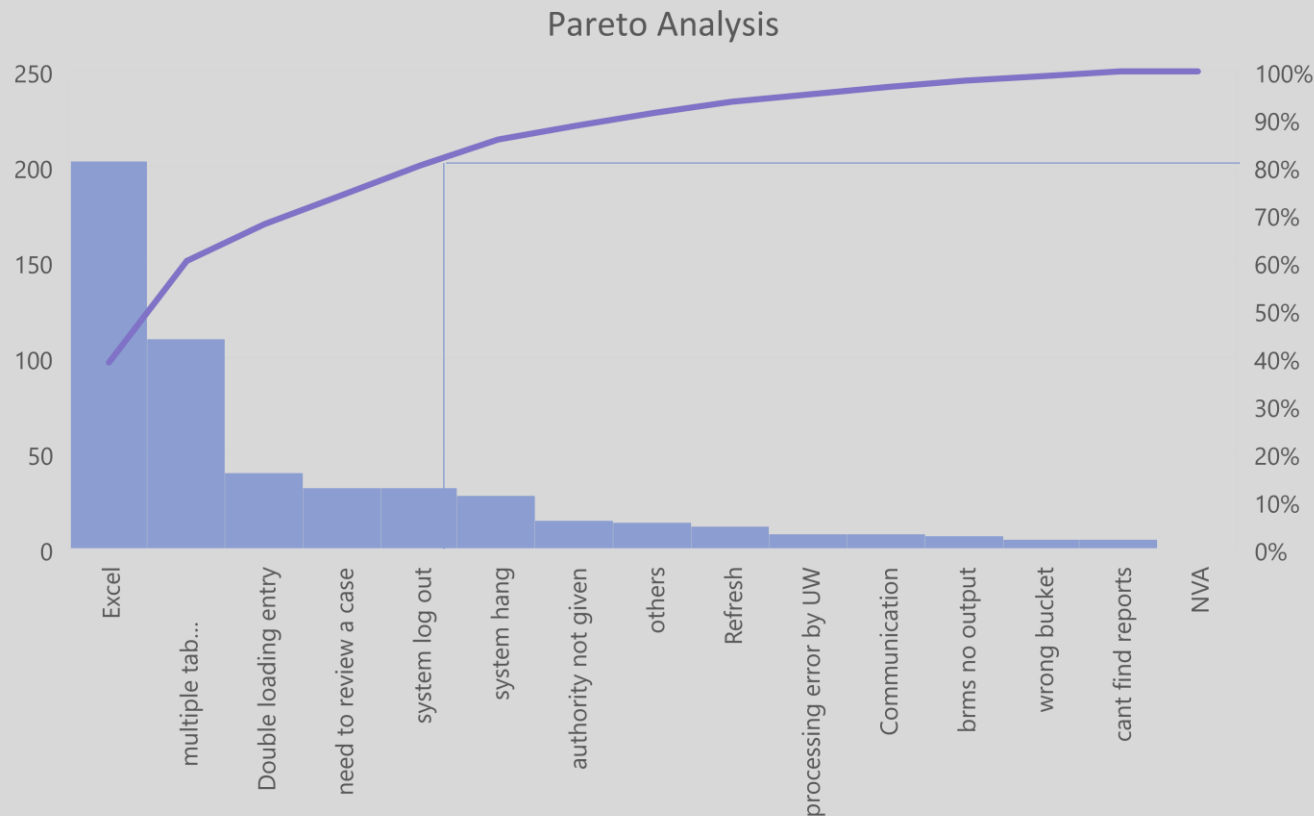
% Distribution of Non Value Added Activities



Overview of Non Value Added Activities

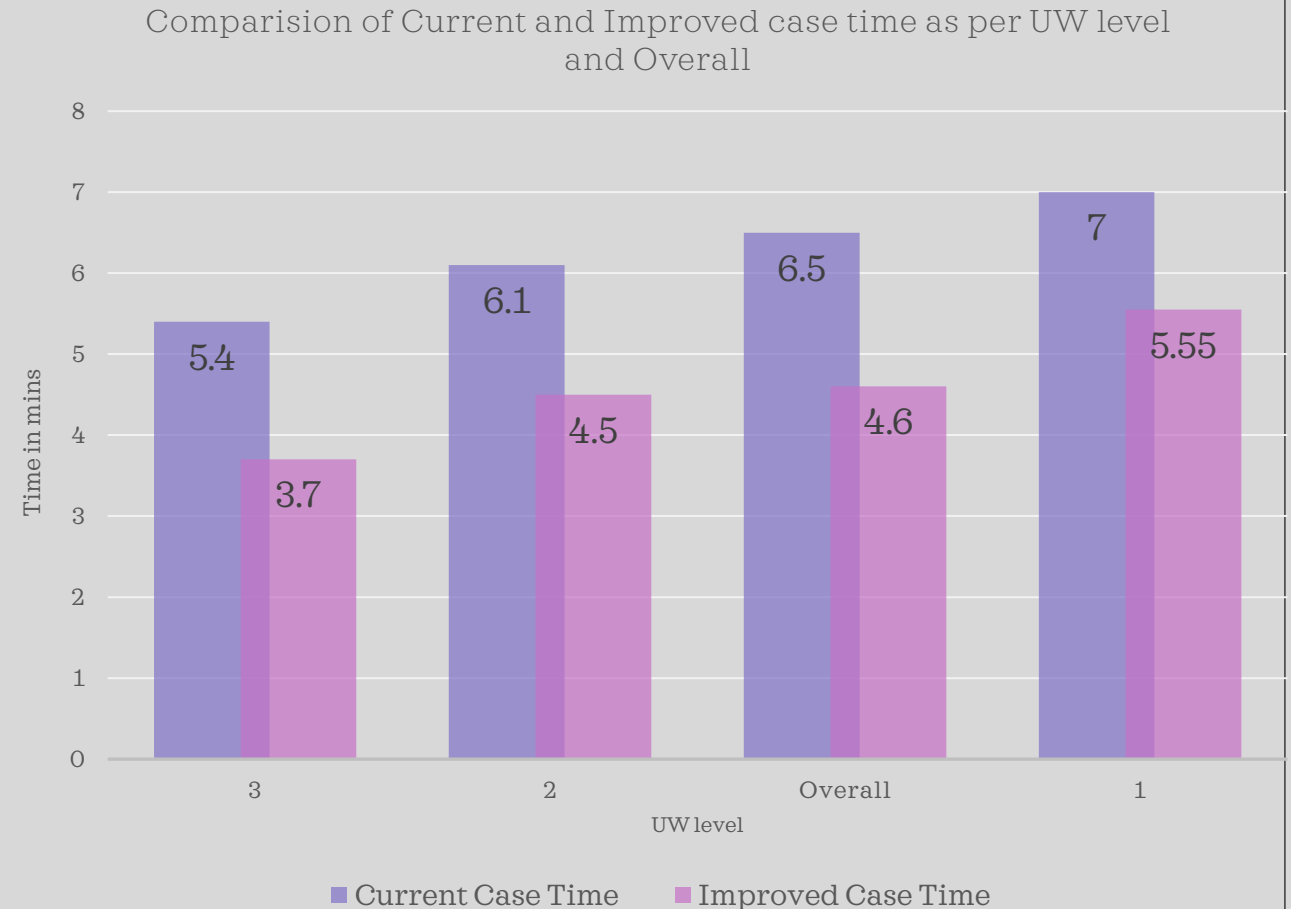
Challenge	Error % (out of 203 samples)	%time per total non value added (6.5 hours of NVA time)	Impact on productivity (No of extra cases per UW per day)	Improved Daily productivity (cases per day)	UW saved
Maintaining Excel Base Sheet	100%	48%	8	65	1.1
Rework of cases of another UW	16%	6%	1	6	0.1
Multiple tab movements	54%	20%	3	24	0.4
Communication	4%	10%	1	7	0.1
IT bugs	58%	16%	3	26	0.5

Pareto Analysis



- Pareto principle: 80% of the effects can be attributed to 20% of the causes.
- Issues identified as most occurring:
 - **Excel**
 - **Multiple tab movements**
 - **Double loading entry**
 - **System hang**
 - **Need to rework case**

- Finally, potential benefit of resolving NVA activities were analysed on an overall level.
- Assuming all the NVA activities are addressed, the average TAT of a case (irrespective of product and underwriter), can be reduced from **6.5 min to 4.6 mins.**
- For a level 3 underwriter, TAT can be reduced from **5.4 min to 3.7 mins**, from **6.1mins to 4.5 min** and from **7 to 5.5 min** for a level 2 and level 1 underwriter respectively.



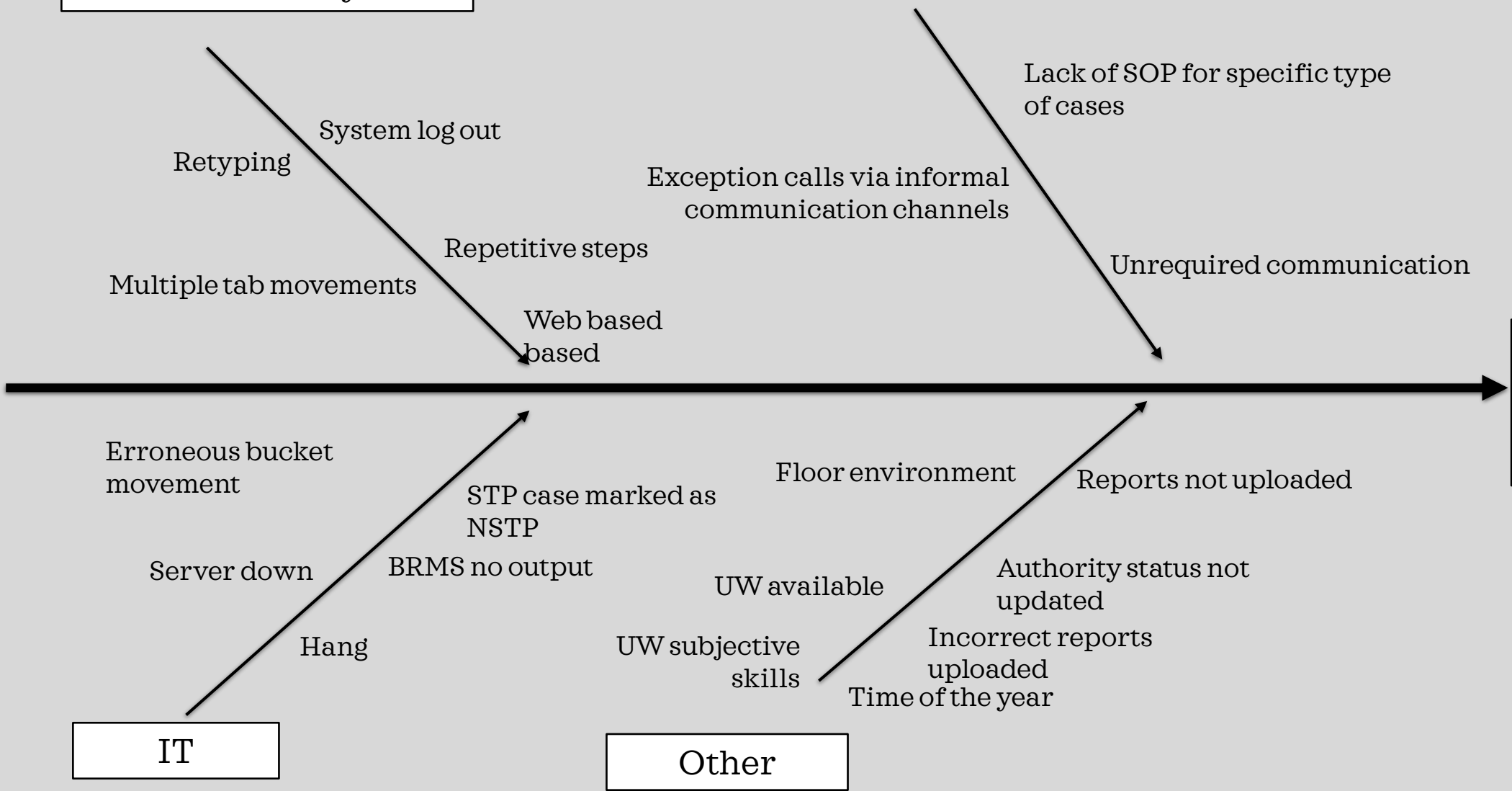


FISH BONE ANALYSIS

Nature of Core System

Communication

Increase
in
processing
time

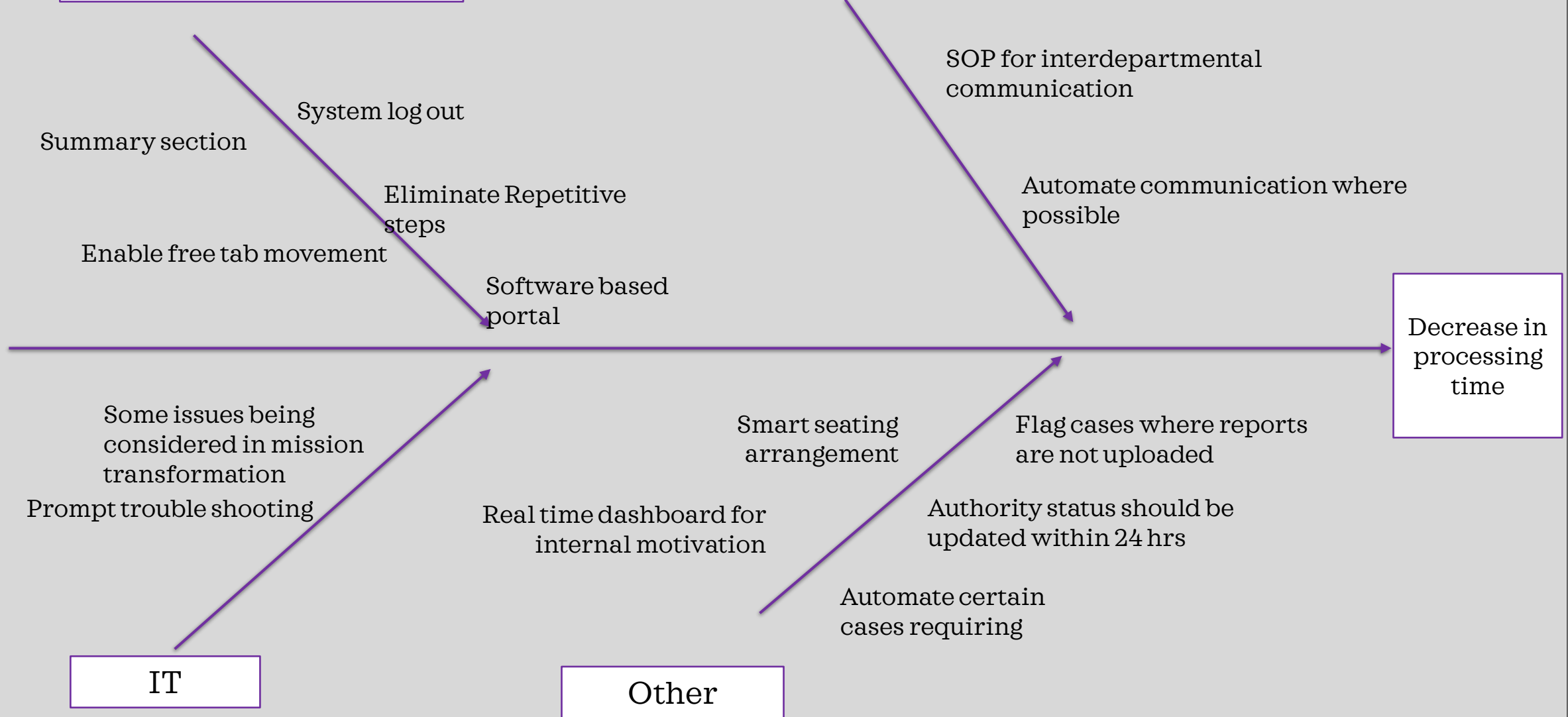




REVERSE FISH BONE ANALYSIS

Nature of Core System

Communication



Conclusion

- Non-value-added activities comprise 30% of the overall process. Eliminating such activities can reduce the average process time from 6.5 minutes per case to 4.3 minutes per case.
- Currently an UW spends almost 2 hours per day on NVA activities.
- If these activities are eliminated, the productivity of each UW can increase by 16 cases per day.
- Overall number of UW can be reduced from 8 to 6.
- Total productivity can increase to 539 cases per day.

Suggestions

- Provision of a **summary section** in the system such that on logging in, UW is able to view personal log of cases done and summary of each case appears alongside, exclusively for UWs, will eliminate the process of retyping findings.
- **Real time dashboard** can help internal motivation of UW and allow them to track their progress with respect to other UWs. Smart seating arrangement can reduce movement from one place to another.
- **Prompt resolution** of IT bugs.
- **Automation** of certain cases by rating method.
- Establish **SOP** for single line of inter departmental communication.

References

1. IRDAI Annual report 2018-2019 [https://www.irdai.gov.in/admincms/cms/uploadedfiles/annual reports/IRDAI English Annual Report 2018-19.pdf](https://www.irdai.gov.in/admincms/cms/uploadedfiles/annual%20reports/IRDAI%20English%20Annual%20Report%202018-19.pdf)
2. Basics of Health Insurance IC-35, Chapter 4 Health Insurance and Underwriting Principles. p 113, 14.
3. Basics of Health Insurance IC-35, Chapter 4 Health Insurance and Underwriting Principles. p 128. Diagram 4
4. Global analysis of health insurance in India, EY and Oxford Economics, [https://www.ey.com/Publication/vwLUAssets/EY-global-analysis-of-health-insurance-in-india/\\$File/ey-global-analysis-of-health-insurance-in-india.pdf](https://www.ey.com/Publication/vwLUAssets/EY-global-analysis-of-health-insurance-in-india/$File/ey-global-analysis-of-health-insurance-in-india.pdf)
5. Emerging Health Insurance in India – An overview, J Anita, 10th global conference of actuaries, [https://www.actuariesindia.org/downloads/gcadata/10thGCA/Emerging Health Insurance in India-An overview_J Anitha.pdf](https://www.actuariesindia.org/downloads/gcadata/10thGCA/Emerging%20Health%20Insurance%20in%20India-An%20overview_J%20Anitha.pdf)
6. Anand Thakur and Sushil Kumar (2013), Health Insurance Penetration in India: Implications for Marketers, Special Issue: Proceedings of 2nd International Conference on Emerging Trends in Engineering and Management, ICETEM, International Journal of Advances in Engineering Sciences Vol.3 (3), July, 2013 e-ISSN: 2231-0347 Print- ISSN: 2231-2013.
7. Aggour, K. S., Bonissone, P. P., Cheetham, W. E., & Messmer, R. P. (2006). Automating the Underwriting of Insurance Applications. *AI Magazine*, 27(3), 36. <https://doi.org/10.1609/aimag.v27i3.1891>
8. Murtaugh, C., Kemper, P., & Spillman, B. (1995). Risky Business: Long-Term Care Insurance Underwriting. *Inquiry*, 32(3), 271-284. Retrieved June 18, 2020, from www.jstor.org/stable/29772556
9. Mohammad Mahdi Khalili, Mingyan Liu, Sasha Romanosky, Embracing and controlling risk dependency in cyber-insurance policy underwriting, *Journal of Cybersecurity*, Volume 5, Issue 1, 2019, tyz010, <https://doi.org/10.1093/cybsec/tyz010>
10. Mahal, A. (2002). Assessing Private Health Insurance in India: Potential Impacts and Regulatory Issues. *Economic and Political Weekly*, 37(6), 559-571. Retrieved June 18, 2020, from www.jstor.org/stable/4411719



Thank you