SCM 517

CASE STUDY: GenTech

Agenda

3 Introduction

- **Company Background:** Gentech, a $60 billion multinational, operates in over 100 countries with 150,000 employees, offering software, hardware, and integrated business solutions.
- **Business Challenge:** Due to rising competition, Gentech has seen an 18% revenue drop over two years. The CEO aims to regain market leadership by improving operational efficiency.
- **Objective:** A 15% reduction in the cycle time for proposal creation is targeted to enhance responsiveness to customer needs and improve competitiveness.
- **Operational Focus:** The Proposal Creation Process, involving multiple hand-offs and dependencies, is identified as a critical area for improvement.
- **Lean Six Sigma Approach:** Gentech's task force, led by VP Grace Monroe and supported by Lean Six Sigma Black Belt Jeff Hugh, will analyze and streamline the process using data-driven insights from ERP systems to validate and address inefficiencies.

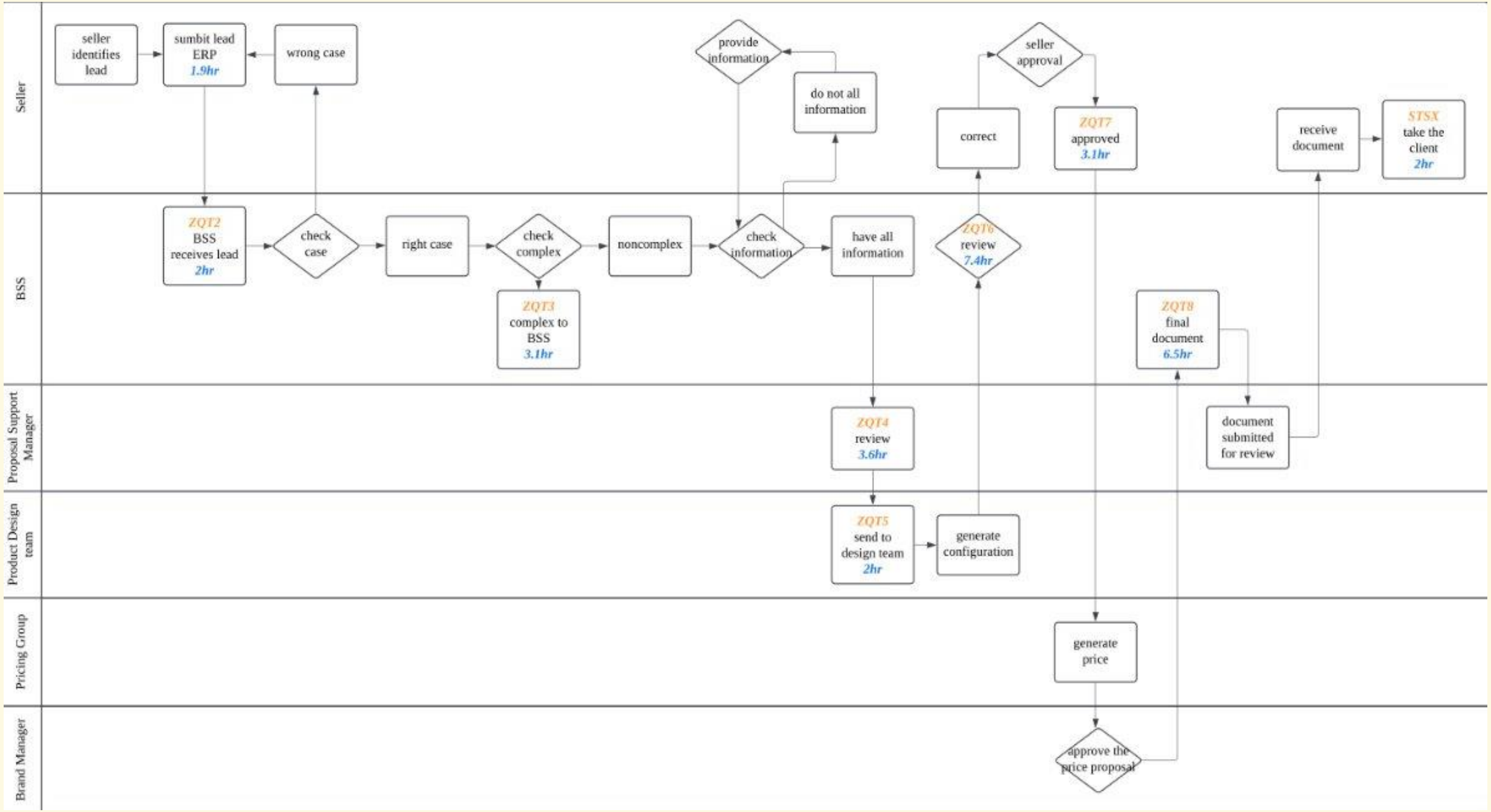
4 PROJECT CHARTER

Business Problem	**Specific & Measurable:** Gentech has faced an 18% reduction in revenue due to inefficiencies in the supply chain and increased competition, specifically within the proposal creation process. **Objective:** Reduce cycle time and improve process efficiency to regain competitiveness. **Root Cause:** The process includes non-standard practices, excessive approvals, and redundant tasks that extend cycle time. **Solution:** Streamline the process using data analysis and Lean Six Sigma tools.
Objective	**Means:** Re-engineer the proposal creation process through Lean Six Sigma. **Outcome:** Achieve a 15% reduction in proposal creation cycle time to facilitate faster client engagement. **Quantified Improvement:** 15% reduction in cycle time. **Timeline:** 6 months, following the DMAIC methodology
Scope	**Included:** All brands (X Series Servers, Z Series Servers, ESW, Consulting Services, SWG) and all regions (South America, EMEA, Japan, North America, Asia Pacific). **Not Included:** Content of proposals or sales strategies; focus strictly on the creation process.
Executive Sponsor	Mr. Elliot Smith, CEO of GreenTech

5 PROJECT CHARTER

	DMAIC APPROACH	BASELINE	TARGET
DEFINE	Outline the problem scope and determine the current baseline for cycle time in proposal creation.	Operational Metric : Current cycle time as gathered from ERP data	**15% reduction in cycle time from the baseline.**
MEASURE	Use ERP data for timestamp information, identifying each step's duration and the total cycle time.		
ANALYSE	Examine root causes for delays, focusing on hand-offs, approvals, and inefficiencies.	Projected Savings	
IMPROVE	Develop targeted solutions to streamline hand-offs, reduce redundant approvals, and standardize steps.	Expected cost savings from reduced cycle time, enhanced proposal efficiency, and potential revenue growth from quicker client engagement.	
CONTROL	Implement a control plan to monitor cycle time post-improvement and ensure sustained result		

Process Map

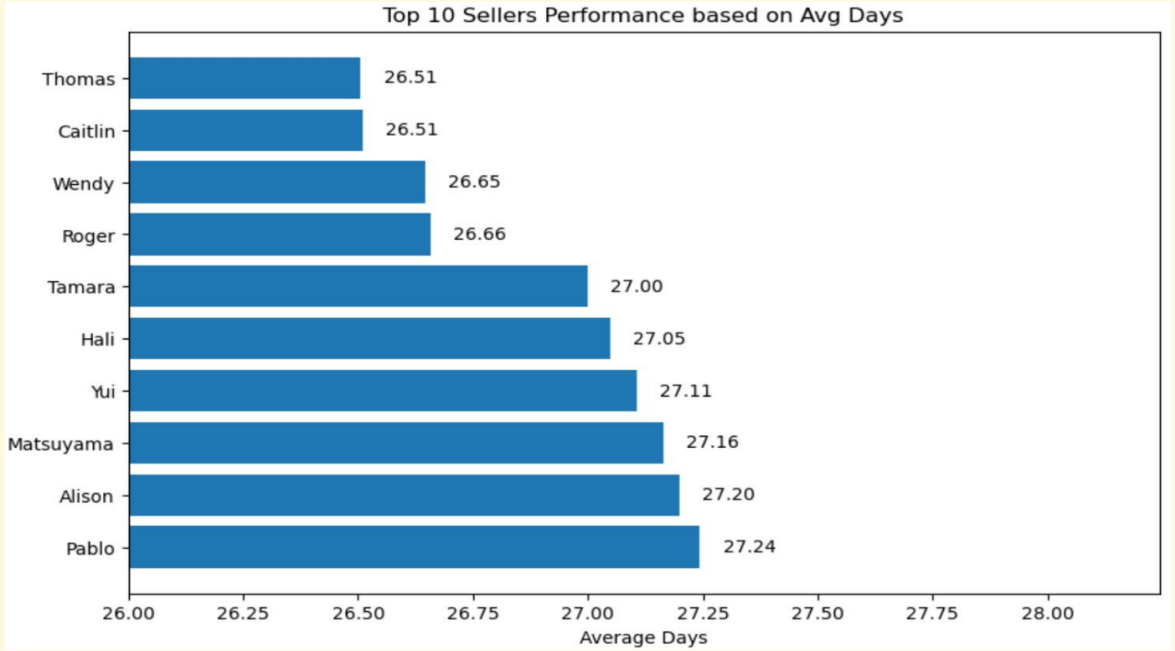

Seller
BSS
Proposal Support Manager
Product Design team
Pricing Group
Brand Manager
seller identifies lead
sumbit lead ERP 1.9hr
wrong case
provide information
do not all information
seller approval
correct
ZQT7 approved 3.1hr
receive document
STSX take the client 2hr
ZQT2 BSS receives lead 2hr
check case
right case
check complex
ZQT3 complex to BSS 3.1hr
noncomplex
check information
have all information
ZQT6 review 7.4hr
ZQT8 final document 6.5hr
ZQT4 review 3.6hr
document submitted for review
ZQT5 send to design team 2hr
generate configuration
generate price
approve the price proposal

8 Performance Level: DPMO & σ-Level

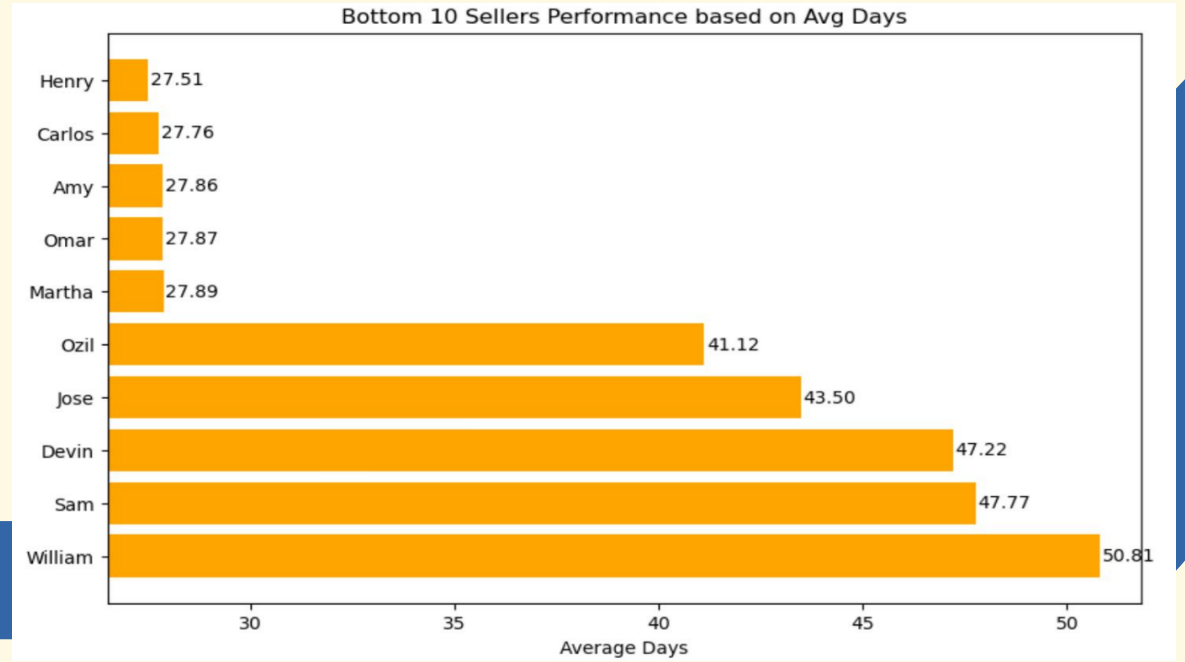
DPMO	Interpretation	σ-Level	Interpretation	Conclusion
281,053.33	281,053.33 signifies that for every 1,000,000 opportunities, there are 281,053 defects.	2.08	This sigma level indicates a low level of process capability.	A 2 Sigma level roughly corresponds to a defect rate of around 30%, meaning that approximately 3 in every 10 opportunities result in a defect.

SELLERS

Seller	Avg_Days
Thomas	26.505209
Caitlin	26.508895
Wendy	26.646721
Roger	26.657266
Tamara	26.998918
Hali	27.047570
Yui	27.105014
Matsuyama	27.163292
Alison	27.199666
Pablo	27.243146

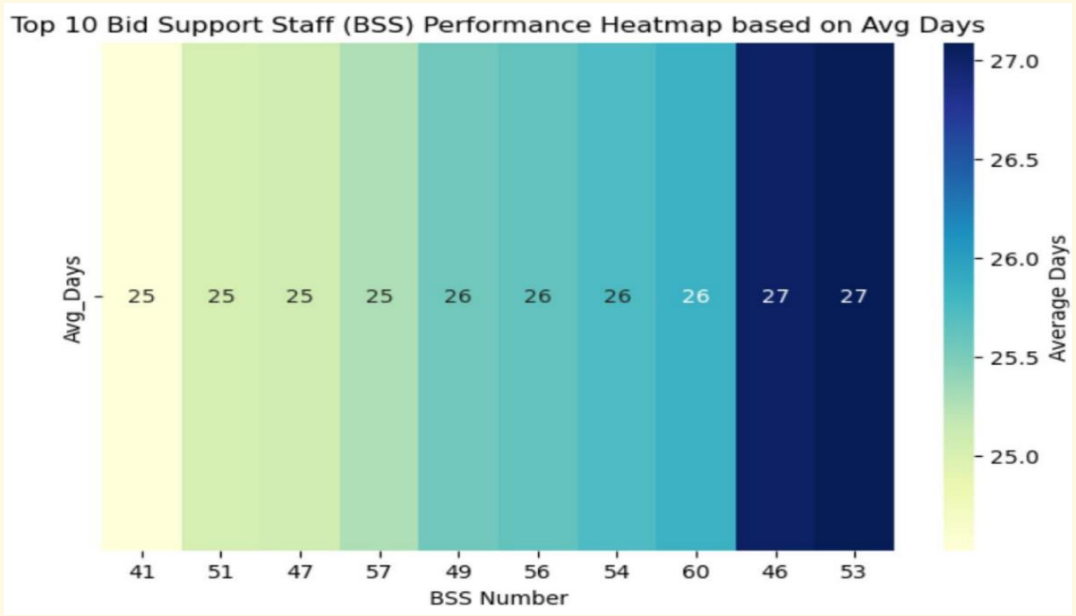


Seller	Avg_Days
Henry	27.511041
Carlos	27.761791
Amy	27.860694
Omar	27.867919
Martha	27.885560
Ozil	41.122558
Jose	43.498055
Devin	47.217113
Sam	47.771448
William	50.811591

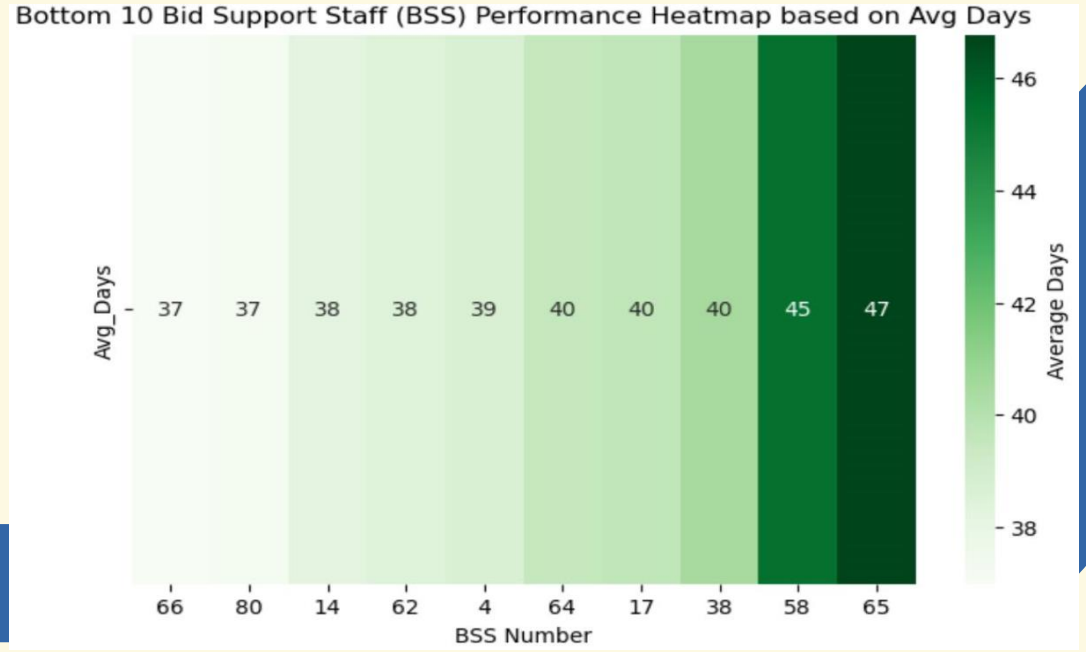


BSS AGENTS

BSS	Avg_Days
41	24.519896
51	25.039807
47	25.081633
57	25.280962
49	25.545018
56	25.618089
54	25.731859
60	25.843033
46	27.015912
53	27.088259

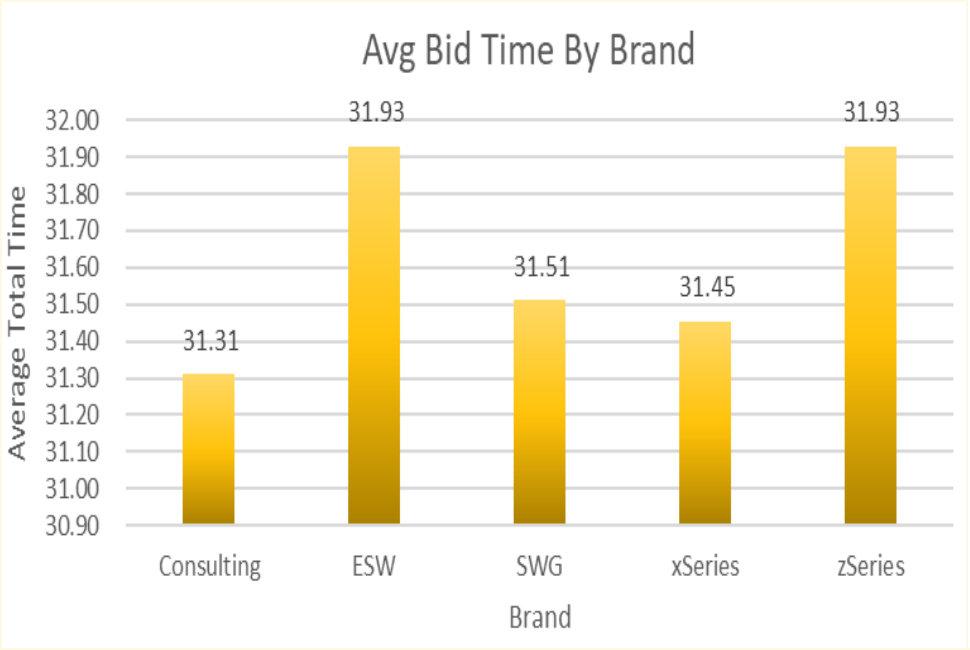


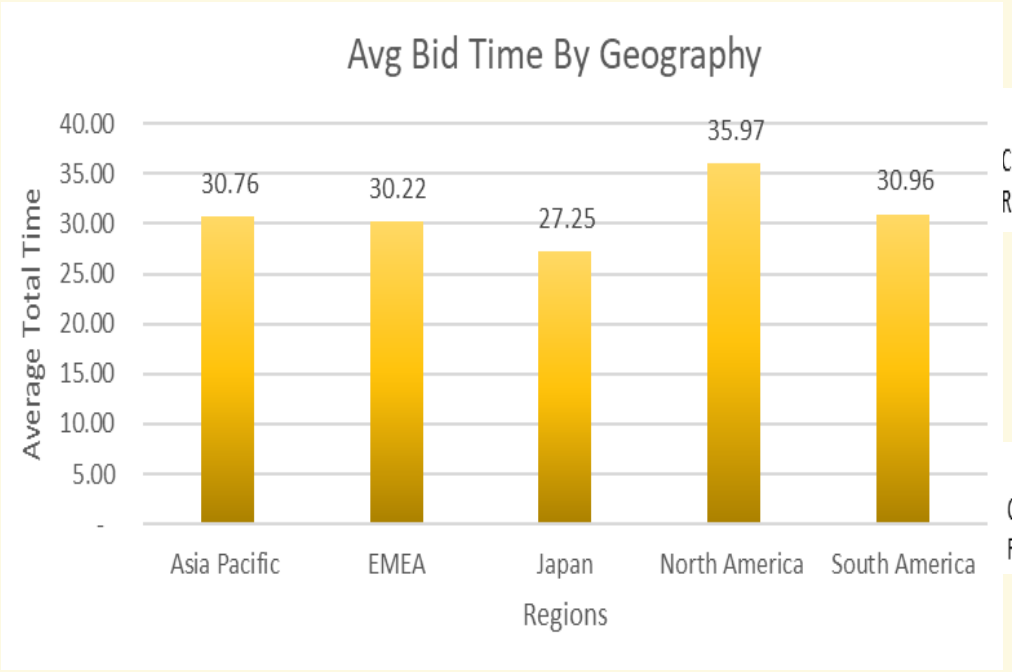
BSS	Avg_Days
66	36.989108
80	37.246174
14	38.195932
62	38.431333
4	38.746251
64	39.504450
17	39.662971
38	40.493528
58	45.394965
65	46.777533



11 Outperformance: Brands & geography

Visualizations





Statistical Tests

ANOVA- Geography

$H_0 : \mu_{AP} = \mu_{JPN} = \mu_{SA} = \mu_{NA} = \mu_{EMEA}$

H_1 : There exists at least one pair of regions (i, j) such that $\mu_{Geo_i} \neq \mu_{Geo_j}$

	sum_sq	df	F	PR(>F)
C(Geo)	5.546682e+05	4.0	1548.764504	0.0
Residual	6.714601e+06	74995.0	NaN	NaN

Interpretation: Reject the Ho and conclude that there are statistically significant differences in average time across geographic regions.

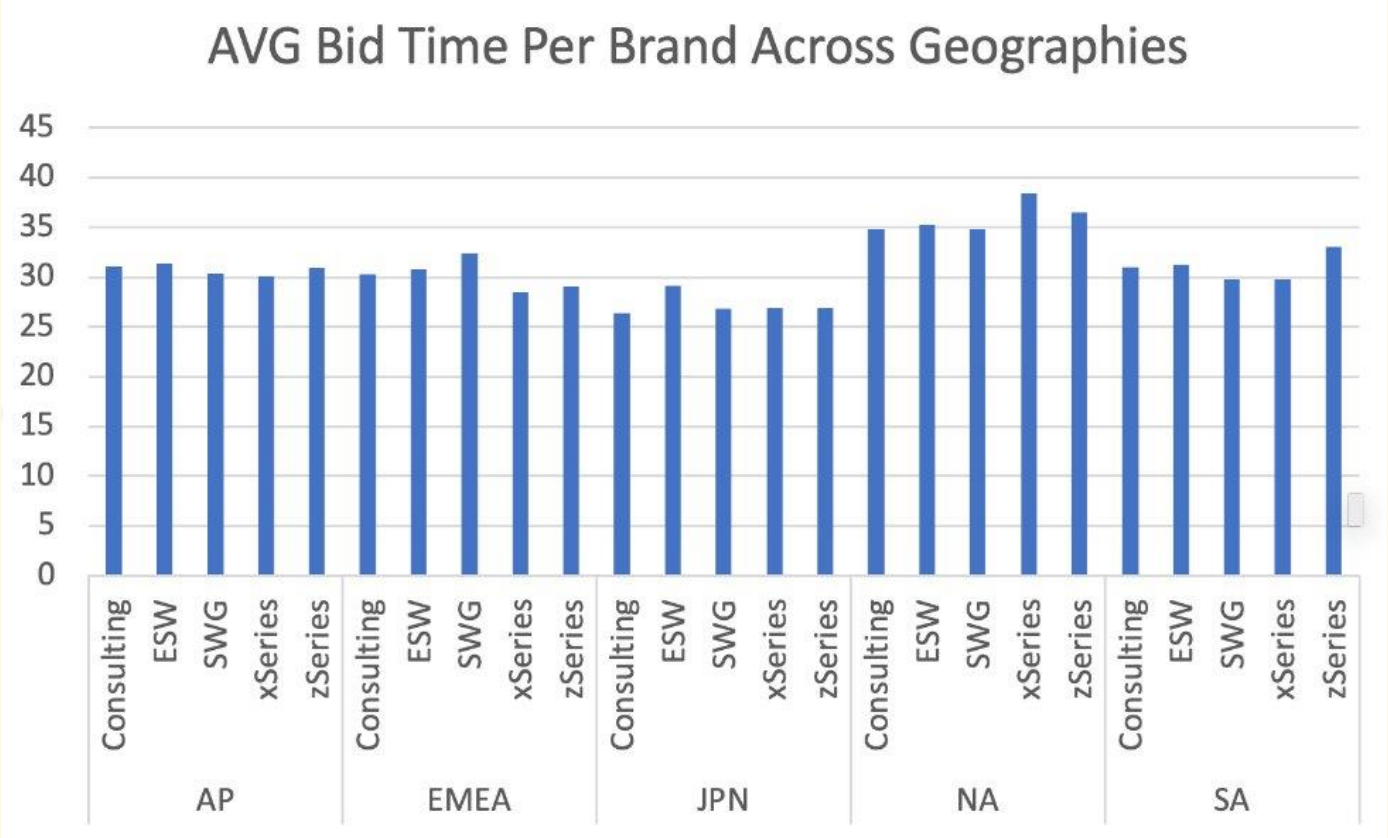
ANOVA- Brands

	sum_sq	df	F	PR(>F)
C(Brand)	4.890115e+03	4.0	12.620974	2.883794e-10
Residual	7.264379e+06	74995.0	NaN	NaN

Interpretation: Reject the Ho and conclude that there are statistically significant differences in average time across brands.

12 Outperformance: Brands & geography

Visualizations



Statistical Tests

ANOVA- Geography & Brand

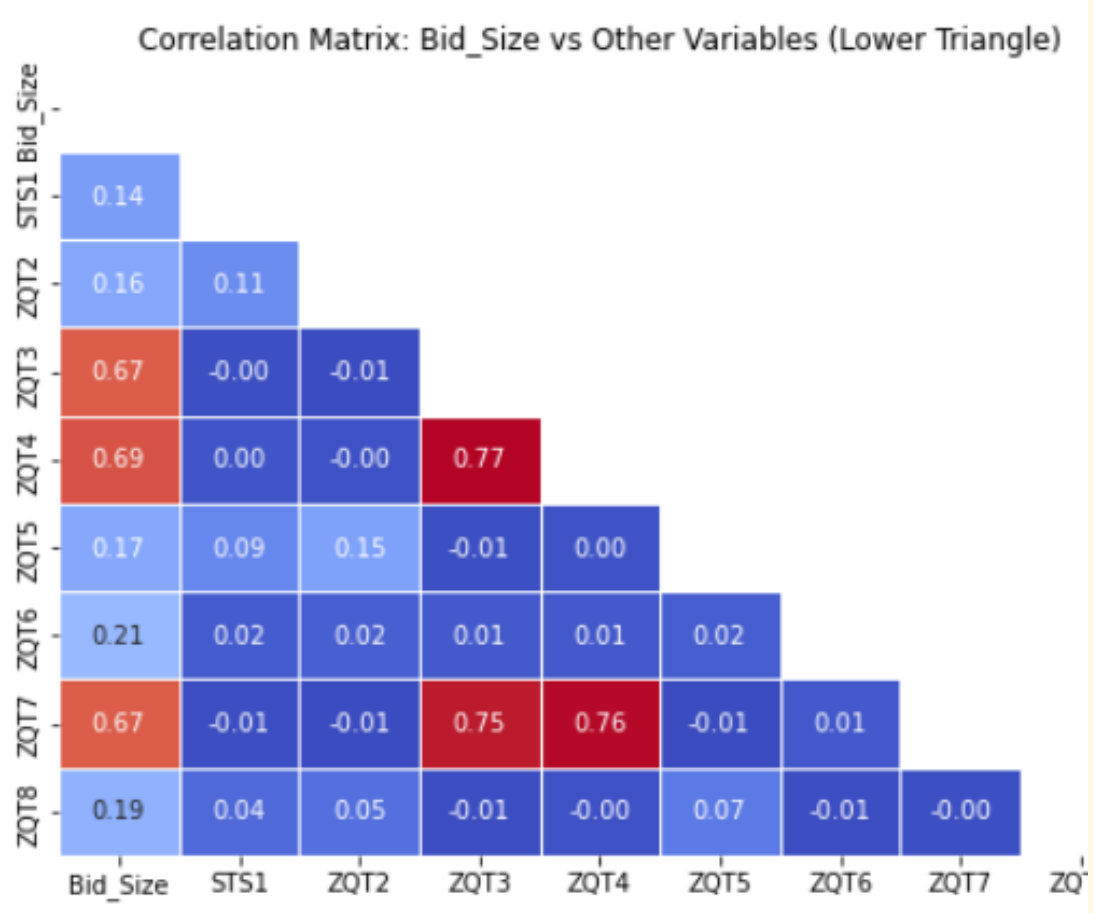
	sum_sq	df	F	PR(>F)
C(Brand)	4.574486e+03	4.0	12.78107	2.119650e-10
C(Geo)	5.543526e+05	4.0	1548.85583	0.000000e+00
Residual	6.710026e+06	74991.0	NaN	NaN

Interpretation: Both Brand and Geo have significant effects on avg time, with Geo having a much stronger impact. The very low p-values indicate these factors are statistically significant predictors of average time.

13 Outperformance: Seller & BSS

14 Outperformance: Seller & BSS

15 Correlation: Bid Complexity& Cycle Time



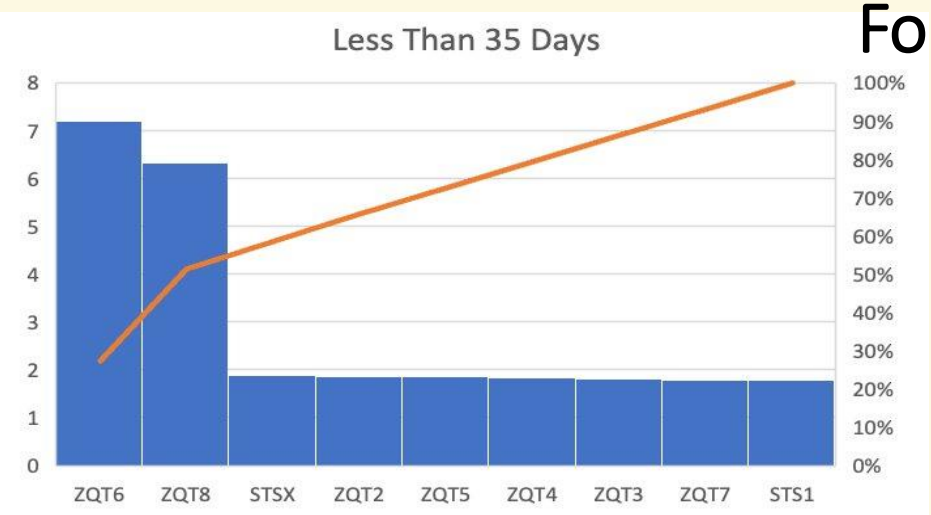
Cycle Time	Correlation with Bid Size	P value
STS1	0.141999	0.0
ZQT2	0.161702	0.0
ZQT3	0.67436	0.0
ZQT4	0.689486	0.0
ZQT5	0.165499	0.0
ZQT6	0.20883	0.0
ZQT7	0.672442	0.0
ZQT8	0.185336	0.0

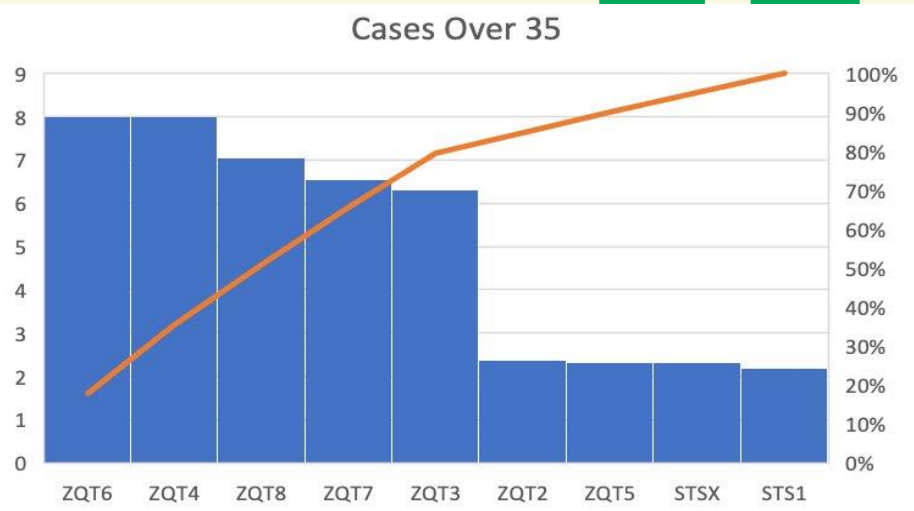
Here we considered the Bid Size as Bid complexity. The higher the bid the higher the complexity.

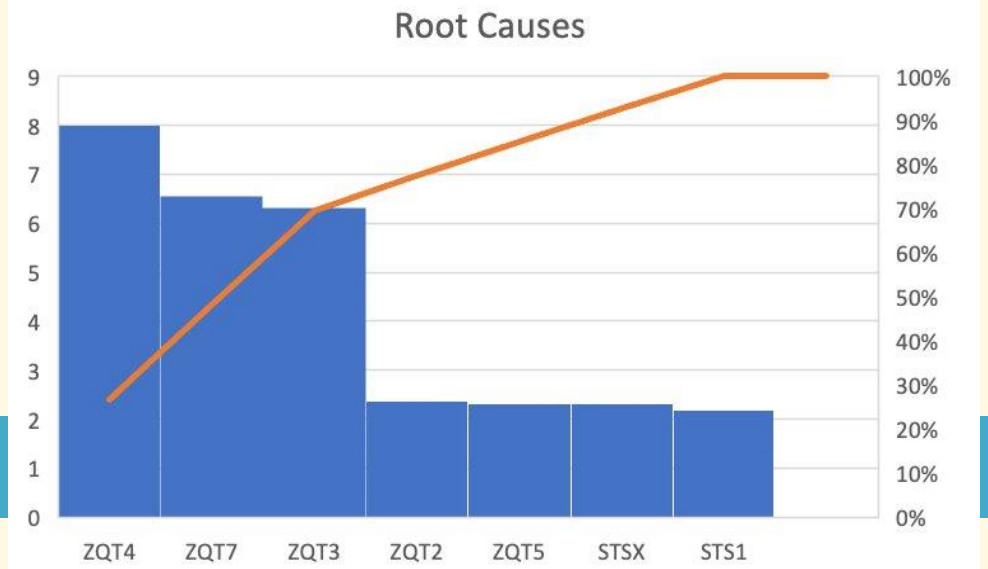
Interpretation: High positive correlation b/w Bid size and ZQT7 (Seller approval of quote), ZQT4(Reviewing the case with PM), ZQT3(Checking info with the seller for cases)

16 Root Causes

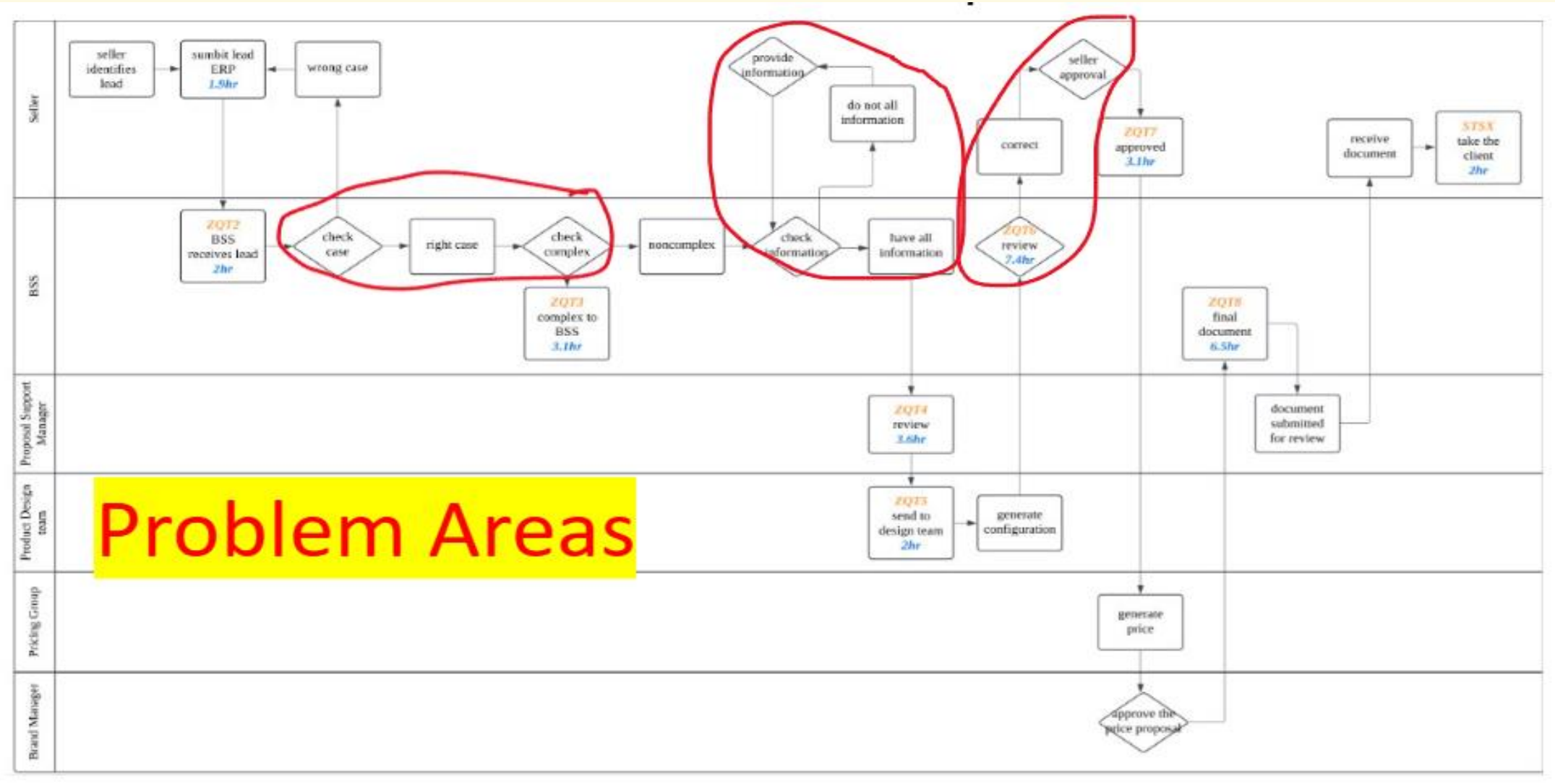
For longer Cycle Times





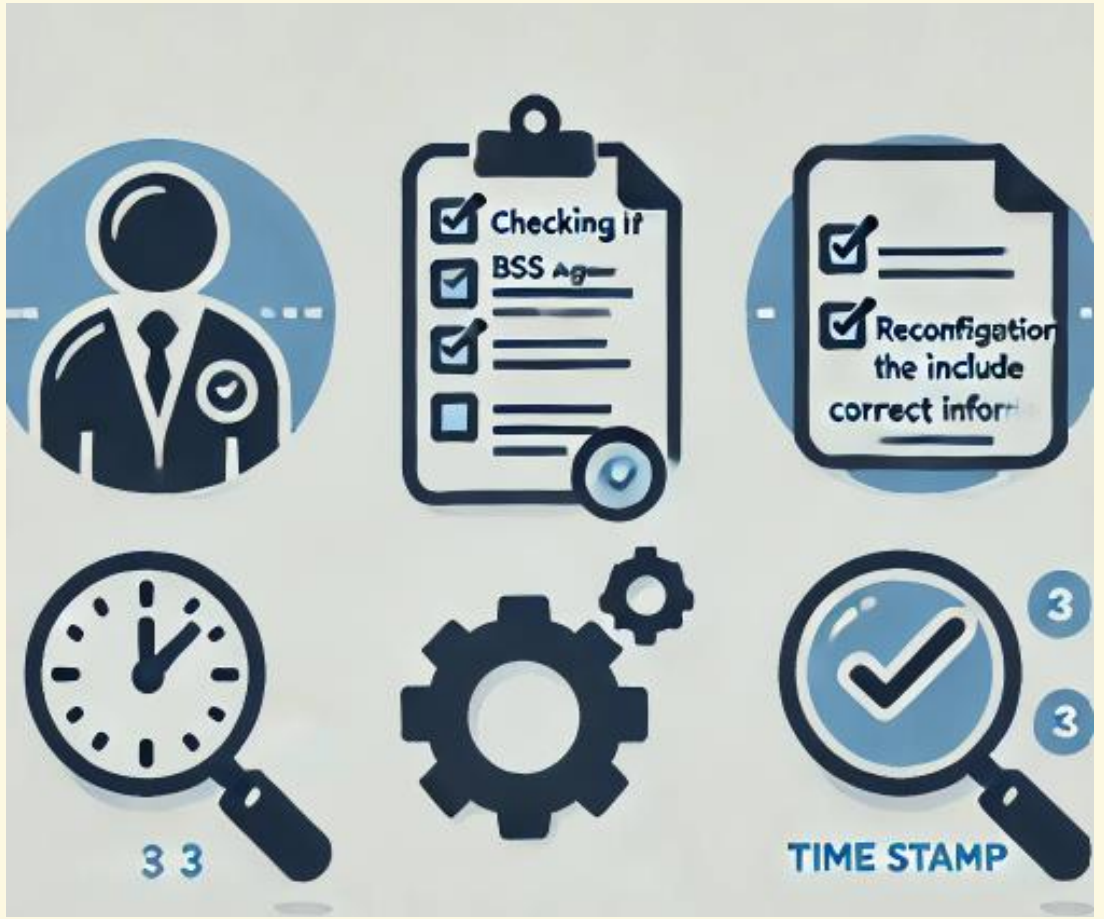


17 Potential Issues in Process



18 Potential Issues in Process

- **Checking if the BSS agent can handle the bid (Time Stamp 3)**
- **Checking to see if the correct information is included (Time Stamp 4)**
- **Any changes to the original request would require a reconfiguration by the Product Design team. Once the configuration has been approved (Time Stamp 7)**



19 Potential Issues in Process

Problems Outside Of Process Map:

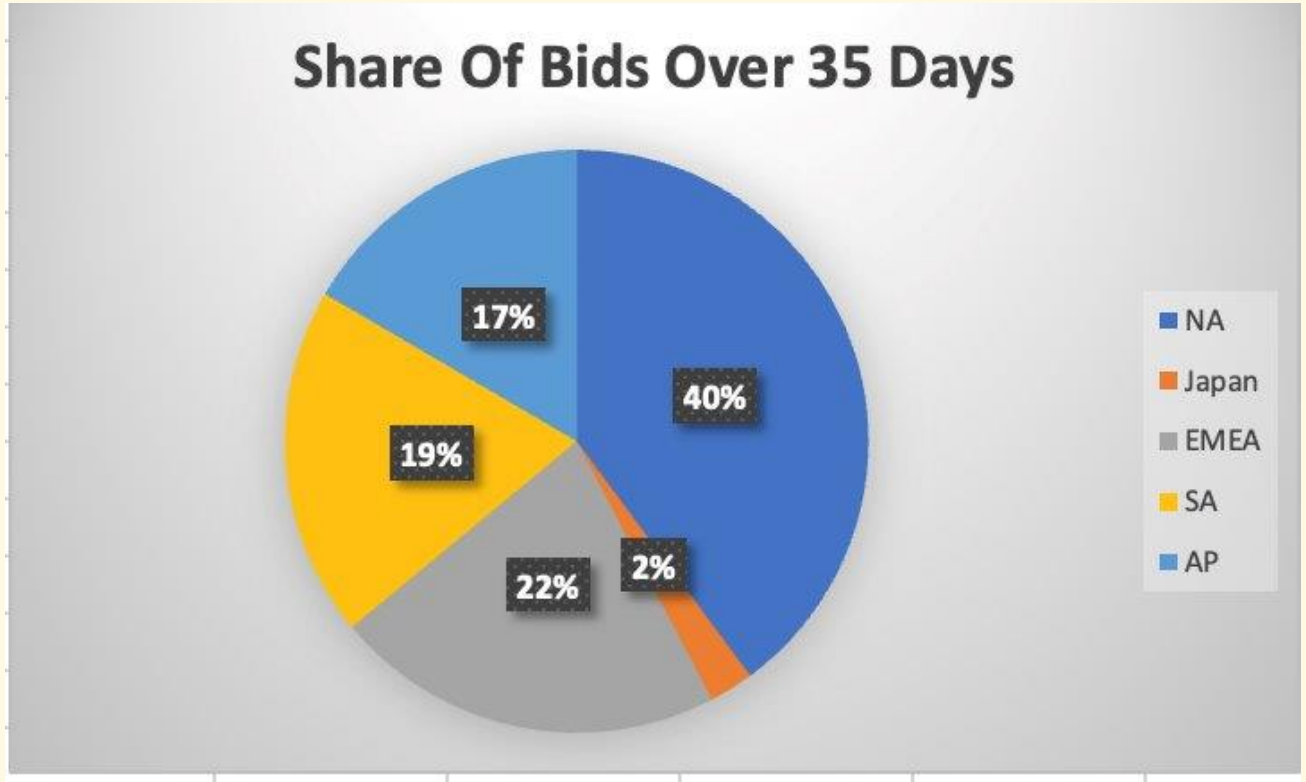
North America accounts for 40% of bids over 35 days

Japan accounts for just over 2%

Solution:

Use Japan as a benchmark

Investigate further into North America

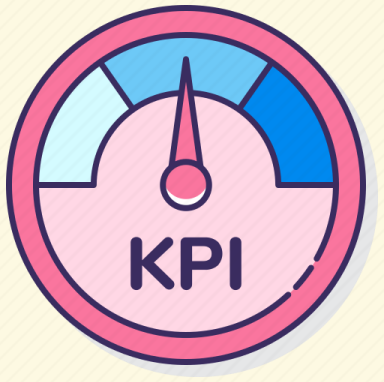


20 Recommendation & Control Plan

- Implement an automated system to keep process on track using KPI’s
- Standardized frameworks for bids to ensure completeness and help align BSS agents with correct bids
- No more sending bids directly to BSS
- Seller approves BSS request sent to design team to ensure the configuration is correctly outlined, negating the need for reconfigurations.

21 Recommendation & Control Plan

- Implement KPI measures to ensure steps are being followed in a timely manor



- Use automated systems to not allow BSS to be sent bids personally

- Implement SOP and standardized frameworks to ensure paperwork is filled out completely and correctly.

22 Team Members

MATT NORDWICK

SYLVIA LIU

MARY JOHN

PRATHEEK NS

Thank you