Process Step	Potential Failure Mode	Potential Failure Effects	S E V E R I T Y	Potential Causes	O C C U R R E N C E	Current Controls	D E T E C T I O N	R P N	Actions Recommended	Resp.	Actions Taken	N E W S E V E R I T Y	N E W O C C U R R E N C E	N E W D E T E C T I O N	N E W R P N
What is the process step	In what ways could the step go wrong?	What is the impact on the customer if this failure mode is not prevented?		What causes the failure mode?		What are the existing controls and/or procedures (inspection and test) that prevent either the cause or the Failure Mode?			What are the actions for reducing the occurrence of the Cause, or improving detection? Should have actions on RPN>100 or Severity=10	Who is responsible for the recommended action?	What are the completed actions taken with the recalculated RPN? Be sure to include completion month/year				
Nightly extract, transform, load process that refreshes report user data	ETL process fails to start	Report users do not see accurate data	7	Schedule expired, expried user credentials	1	Reliance on report users to see that data is not accurate	1	7.00							0.00
	Concurrent ETL processes start	Data is incorrect, seen as up to date	10	User error, in adequete access to logs	1	Restriction on access to ETL system, proper training	5	50.00							0.00
	Source system does not r	Data is incorrect, seen as up to date	10	Incorrect response from source API	8	Balance chart created between DWH and source system to show discrepencies	5	400.00	Submit ticket to source system IT support for improvements to their API. Seek different ETL tools to perform process.	Business Intelligence Team	Consulted source system support team through ticket. Made changes to reduce frequency of error. October 2023	10	2	5	100.00

Potential Failure Mode: ETL process fails to start (RPN: 7)
- Severity (7): The severity is a 7 because although the failure causes report users to see data is not up to date, the data is still correct, although outdated. This failure negatively impacts the business because the data is not up to date at the time report consumers expect.
- Occurrence (1): This failure occurs less than 1 time a year, it is very infrequent.
- Detection (1): This failure mode is easy to spot through a time stamp that is visible to all report end users.

Potential Failure Mode: Concurrent ETL processes start (RPN: 50)
- Severity (10): This is a 10-level on the severity chart because the data presented will be incorrect. Business decisions could be made on incorrect data that is misrepresented.
- Occurrence (1): This failure mode also occurs less than once per year.
- Detection (5): The detection is through an IT administration dashboard that shows data consolidation presented in reports to that of the source system. The detection score is a 5 because end users will have difficulty detecting the issue. It requires a member of the IT staff to diagnose the error.

Potential Failure Mode: Source system does not return all data (RPN: 400)
- Severity (10): The data is presented as accurate and up to date. Report users could make incorrect business decisions from data that is seemingly accurate.
- Occurrence (8): This failure mode is frequent and occurs more than once per week.
- Detection (5): The detection mechanism is the same as that presented above. It requires a member of the IT staff to find and diagnose the error.

After RPN reduction: (RPN: 100)
- Severity (10): The severity remains the same. The solution presented does not reduce the severity of the failure.
- Occurrence (2): The solution put in place reduces the occurrence from multiple times per week to once every other month.
- Detection (5): The detection method remained the same after the solution was put in place.