



Lightspeed System 5 Cell Capacity Increase, RWDD Corp.



Emmanuel Jose Campos Ega
 Counselor: Dr. Héctor J. Cruzado
 Graduate School

Abstract

The Company RWDD is working in a new product release in 2021. Alongside this release, the marketing team is expecting a 10% increase in demand for this product. This forecast will require a project team is dedicated in the research and implementation of capacity increase driven initiatives that enable the plant to attain to this new demand. The focus of the Team will be in System 5 of the Lightspeed Cell and its current capacity and how to increment such capacity in at least 10% for 2021. Quality standards and procurement strategies with external suppliers will be critical to the success of the project.

Introduction

RWDD is a company that manufactures electronic components with more than three hundred thousand units produced daily. It consists of two main facilities: one in Haina, DR. and a second one in Las Piedras, PR.

The business is expecting to receive a significant increase in demand for specific components associated with a newly developed product. Due to this reason, a multidisciplinary project team will be appointed for the evaluation and subsequent implementation of initiatives that enable the plant to satisfy this new demand in the Lightspeed cells at the Las Piedras plant.

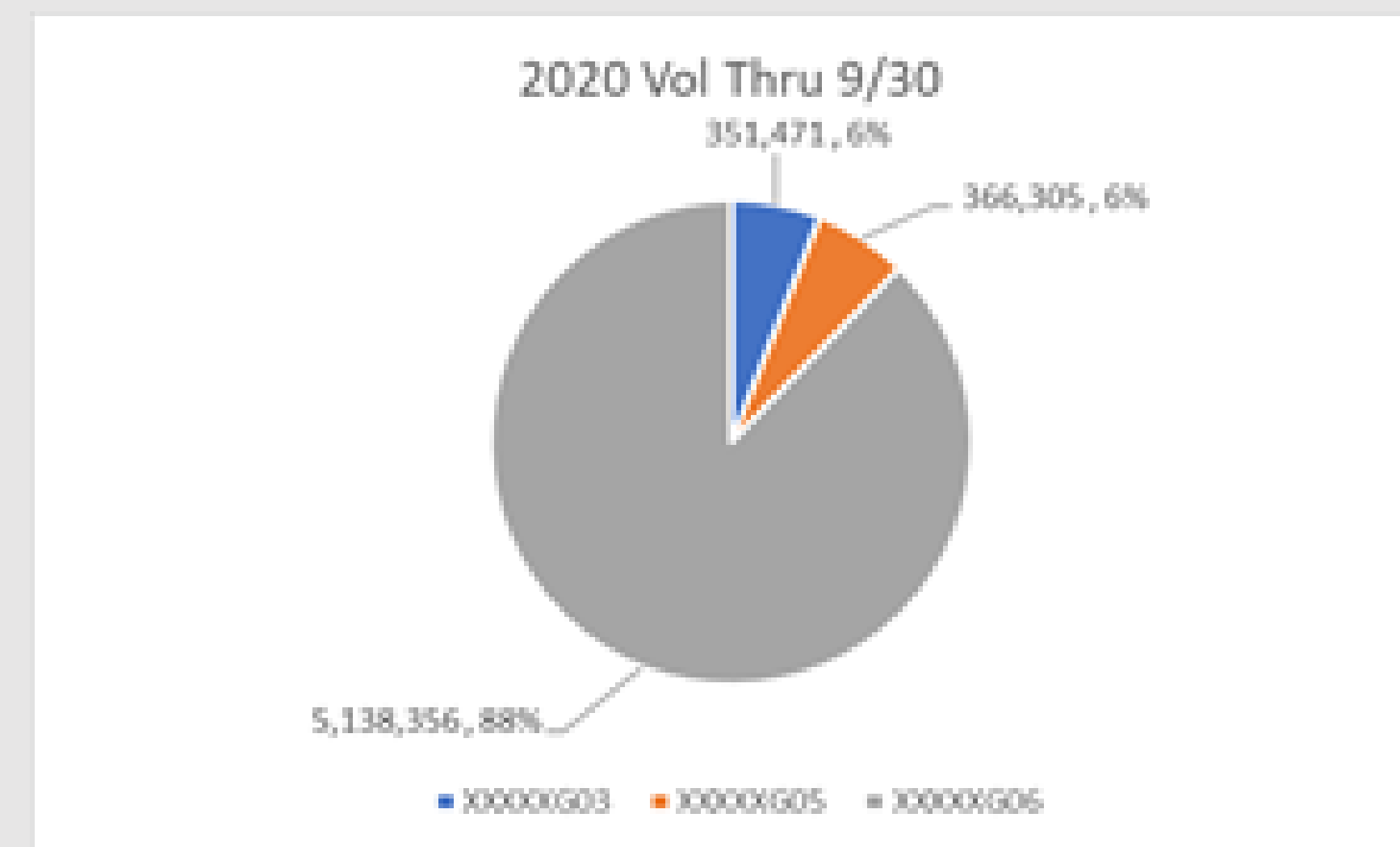
Methodology

The standard methodology used in RWDD for Project Management is the waterfall methodology, as the name implies it lets the project Team cascade through a series of phases, gates or iterations that allow them to set achievable deliverables for each phase and receive inputs and approval from the sponsors at the end of each one.

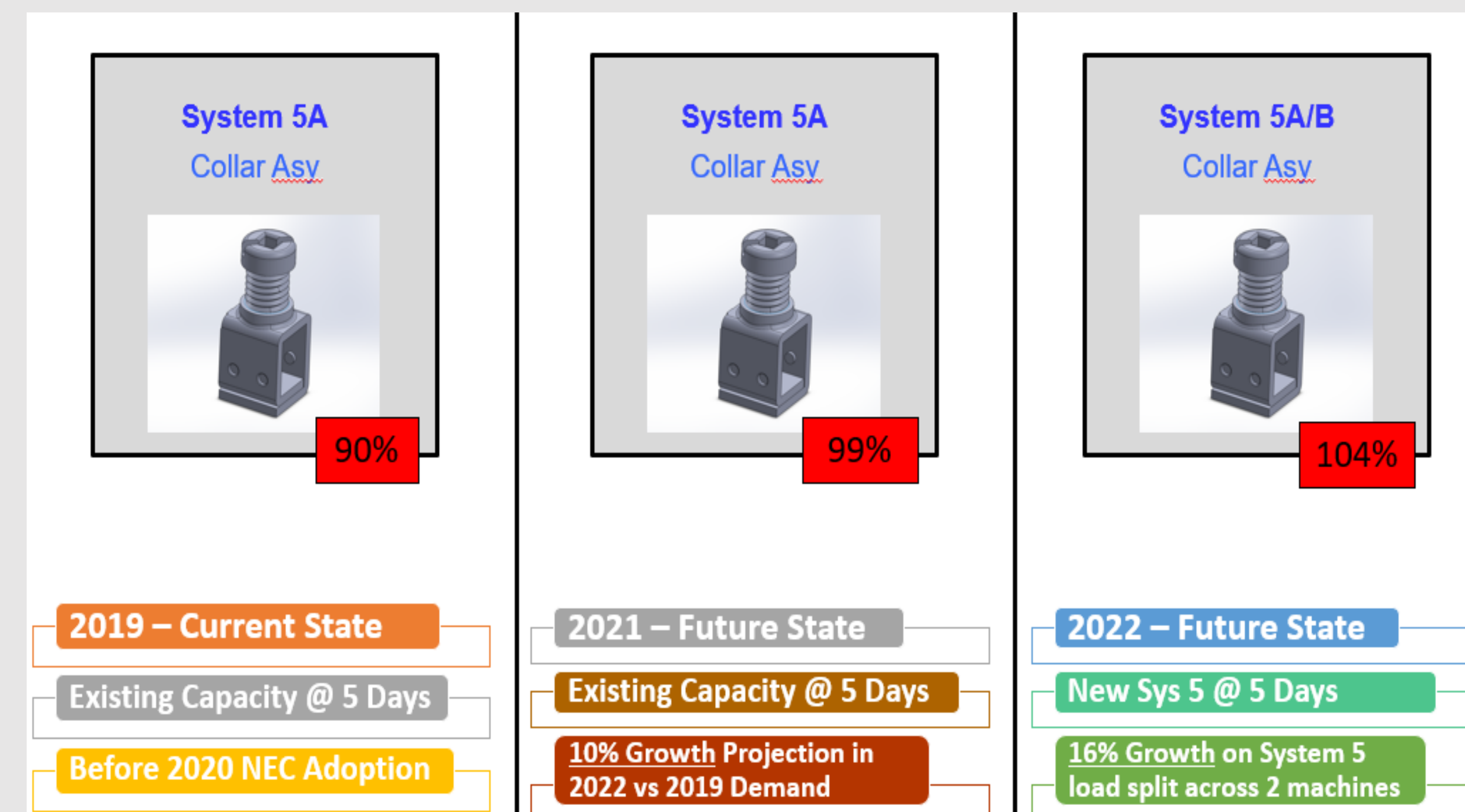


Problem

System 5 is a high-speed automated manufacturing machine that produces specific parts required for the full assembly process of the product. This part produced are daily planned and produced according to the demand and The Plant's schedule. **System 5 has 5.8 MM parts planned for 2020 out of which 12% are low volume styles (G03 & G05).**



For the RWDD business the forecasting exercise is conducted and controlled by the Marketing Team, from their original statement **System 5 will require a 10% total capacity increase** to keep up with the upcoming demand of 2021.



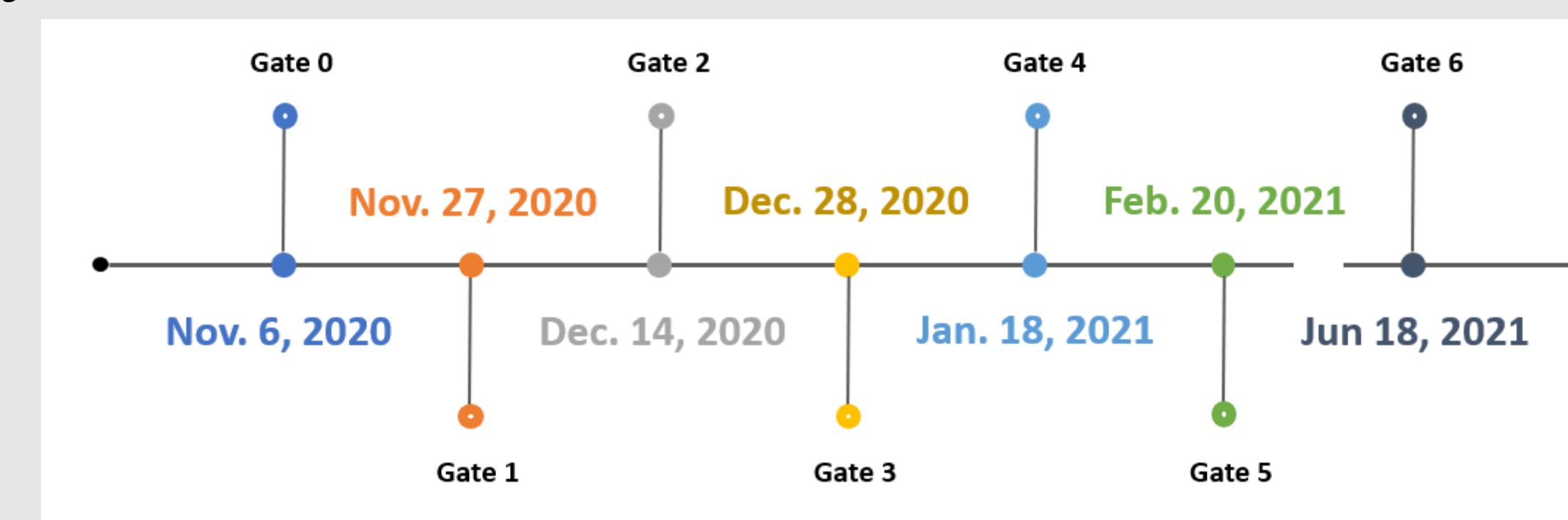
Project Scope

Now that System 5's current production plan has been analyzed as well as received from Marketing the projected forecast from 2021 to 2022, the team and the stakeholders are ready to set scope for the project.

The team establish target will be to increase by at least 10% the capacity of System 5 through the outsource process of G03 & G05 thus freeing enough capacity in the System to sustain the demand until 2022. As part of the scope budgetary and human resources constrains have been identify as well as high risks coming from supplier Quality and the procurement strategies.

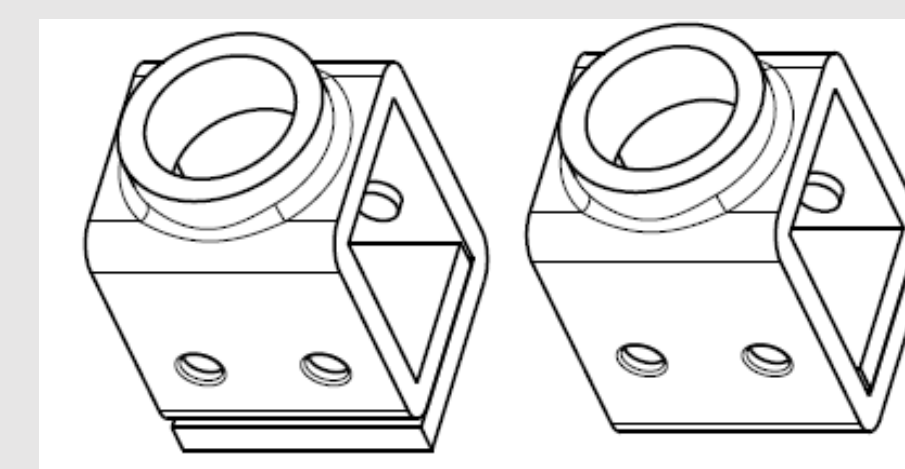
Schedule Base Line

With the project scope and base line requirements and activities set, the team can now proceed to construct and discuss into detail the project schedule

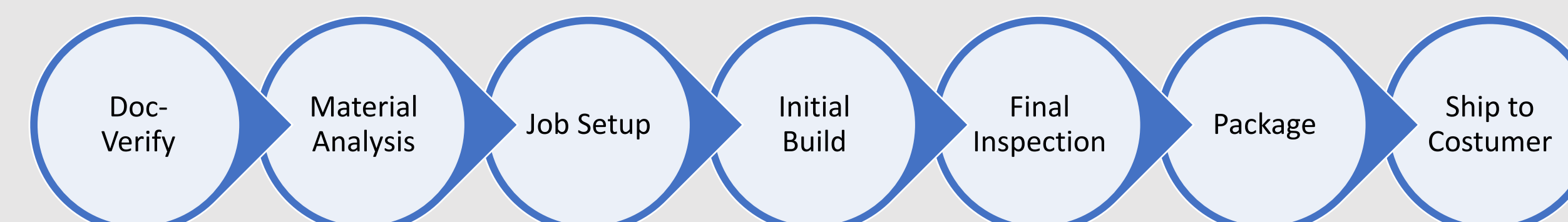


Results

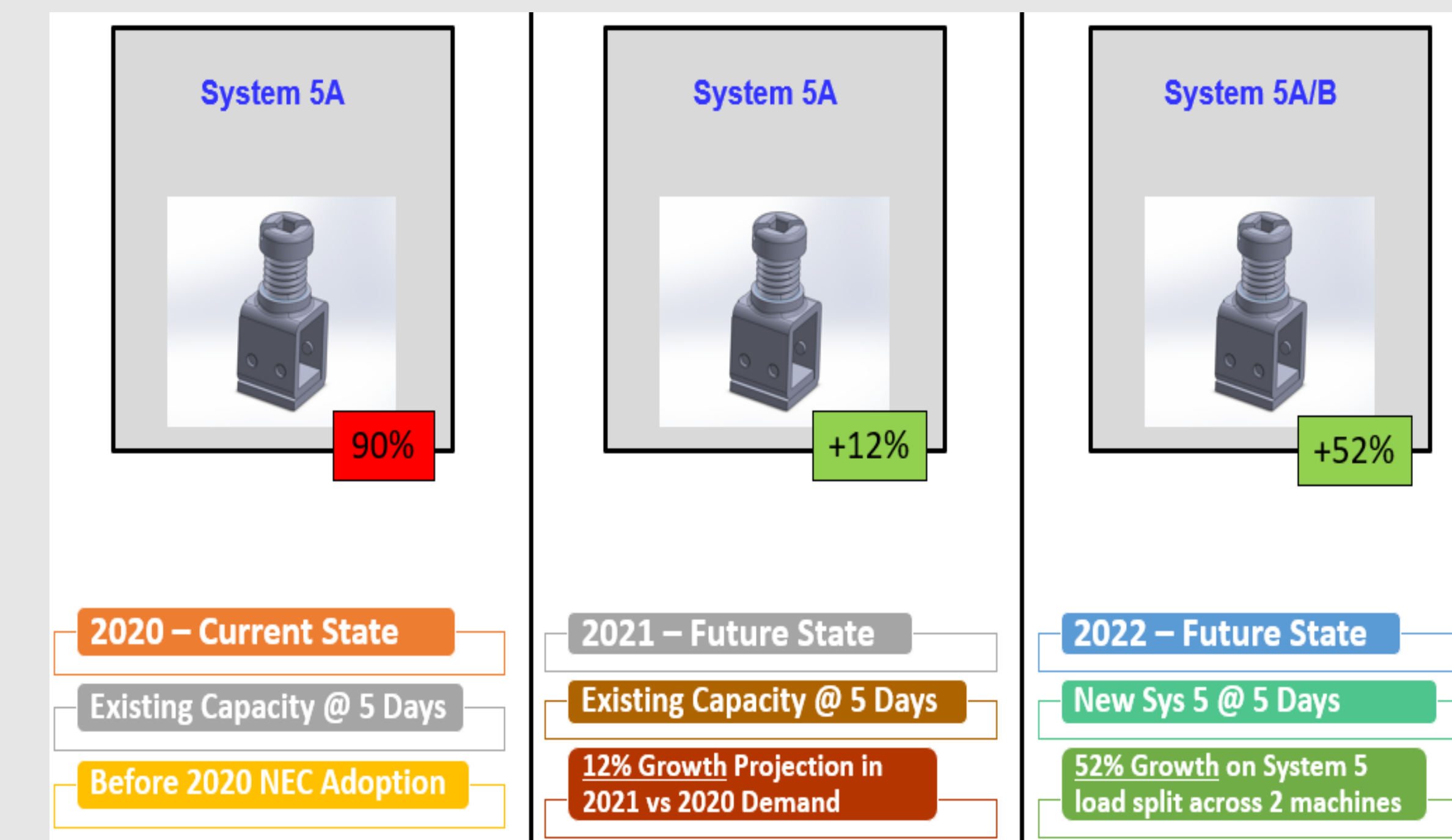
In the early stages of the project the Team presented the scope, schedule and analysis approach to the Sponsors as well as the key Stakeholders from which the Team received full design approval to move ahead into the new suppliers PPAP process.



Gate 3 is one of the most critical gates of any type of project since it is in this gate that CTQ's requirements are validated from the supplier and the Part approval process (PPAP) takes place.



The results obtain from the PPAP submittal gave the tools to the Quality team to approve the Parts and give the green light for full production to Supplier X.



In addition to this results the overall cost avoidance of the project was **US\$2.4 MM**. The Team also set the foundations for a **52% capacity increase** on the current manufacturing plan with the support of Supplier X in 2022 if needed.

Conclusions

Through the correct use the standardized tools from the RWDD business and a well implemented project and procurement strategy the Team could achieve all the expected requirements from the business case.

Quality controls and procedures adherence are the most important requirement to achieve thus ensuring the needs of the costumers are met. In projects of this nature the support from sponsors, stakeholders and expert subject matters are critical for success, this project was not the exception and the Team is grateful for all the support received.