**Q 1)** What are your most valuable priority contributions and lessons learned from the last quarter?

My most valuable priority from 1st quarter is **Deliver excellence & meet business goals** and commitments.

In Q1 worked on multiple user stories and issues which were raised by the users.

1. **Stamping of comments in full buyoff for removals DWR.**

**BUSINESS CRITICAL VALUE:**

* DWR needs to capture remarks/stamps which is part of the official completed record so that an FAA audit would show pertinent maintenance records/values/inputs are being recorded.
* From time to time, shop short stamps will not record the remarks onto the FTWS. This could cause delays, perhaps a missed flight. Affects Shop.
* This could affect our Experimental Ticketing Process and our Licenses to produces aircraft as well as damage our reputation with the FAA.

**Role and Responsibility**

* Analyzed, designed, developed and connect with the stakeholders to understand the entire stamping process and then formulated the stamping comments in proper PDF document which can be downloaded easily from Aircraft Queue trans of DWR.

1. **Aircraft Configuration report generation**

**BUSINESS VALUE**

* Aircraft Configuration report is one of the most important reports that is shared with FAA which contains various details of all the DWRs used in the particular Flight test.
* With this CR DWR is capable of generating the entire report within itself and eliminate the dependency of other Flight Test Application.
* This CR helped DWR one more step closer to being an Enterprise tool and new users are not required to have access of other Flight test application.

**Role and Responsibility**

* Architected, designed, developed and tested the aircraft configuration reporting functionality in DWR. This was a complex user story in which we need to design the logic from scratch, collecting all the aircraft configuration worksheets and their respective cross references from entire DWR database.
* Wrote multiple complex queries of fetching data from multiple tables and sort different attributes based on their desired engineering completion date.
* Create a PDF as well as CSV view of entire aircraft configuration file.
* **With Prior knowledge of FTCS application added addition capability** (which were not mentioned in the CR) for users to provide the previous and next available test number to be more user interactive and save user’s time to find the exact test numbers. Users and stakeholders were very happy looking at the implementation and
* **Initiated multiple design discussion with the stakeholders to cater each and every requirement**. Worked in an agile manner of showing demo and getting feedback after completion of each    module. Raise all questions and scenario prior so that we make sure we follow **FIRST TIME QUALITY** in delivering this big CR.
* **Gave utmost importance to the data integrity so that we should not be missing any cross-reference data.**

1. **DWR: General Workbook Improvements - Access from Aircraft Queue**

**BUSINESS CRITICAL VALUE**:

* Lack of this capability and efficiency of integration between General Workbook and Aircraft Queue has caused manufacturing to go backwards to paper processes for pick-ups and removals. This capability will help engineers to switch back to a fully digital crew shelter.
* Add visibility for engineering.
* Reduce Manufacturing time and effort required to access, manage and conduct work.
* Reached the expectation of general workbook expansion/collapse is on the order of 5 sec or less.
* Goal: Allow Shop and Quality to work primarily within the Aircraft Queue. Reduce training of other functions.

**Role and Responsibility**

* Designed, architected, developed as well as met the user expectation to develop this tool capability to make it more user friendly, robust and to perform reasonably for Non-NW sites.
* Earlier the Shop, Quality or Ground Ops RCS required minimum 12 sec to switch from Aircraft Queue to general workbook but after this integration the switch time has reduced significantly by 10 sec and within 2-3 sec users are able to access.

1. **DWR: Aircraft ID Field Limitations**

**BUSINESS VALUE**

* Field limitations like Aircraft Id, Aircraft Line number, Model and Minor Model number, etc., should be updated so that **DWR will support the expansion into the Military businesses that do not have a commercial aircraft foundation.**

**Role and Responsibility**

* A field limitation and Schema’s are changing **integration testing with all external application** is very important so that we maintain data integrity.
* Conducted meetings with different stakeholders of external application team to perform the integration testing in higher environment to allow seamless integration btw applications.
* Analyzed and eliminated the impacts of database schema change on external applications like Gold, MESci and ACT.

1. **Enable spreadsheet upload capabilities in DWR**

**BUSINESS VALUE**

* DWR users need the ability to attach a spreadsheet to the required parts section of DWR.
* This is helpful in easily ordering spare parts and eliminate the manual copy and pasting all the part information into DWR.
* This will save time and make it much more efficient since spares are usually decided on by the team and documented in Excel and changing the drop downs and scrolling left to right is very time consuming when you are talking 50-100 parts.
* This is estimated to save 1 minute per row of parts and in-turn will save 50-100 minutes for a flight test.

**Role and Responsibility**

* As this user story touches multiple transaction and screen in DWR. Break this into individual stories and connecting with user frequently to gather the requirement.
* **Developing individual MVP and showing demo to the users to get the approval and feedbacks**.

1. **Resolved various Coverity vulnerabilities:**

**BUSINESS VALUE**

High/Medium Severity Coverity issues are critical and makes application vulnerable to various attacks. Our Business is committed to not introduce any new Coverity vulnerabilities in our application and to eliminate or mitigate the exiting issues.

**Role and Responsibility**

* During each deployment we are committed the run the Coverity pipeline against the development code and eliminate any new issues are coming. **We must not merge code to release branch with any new Coverity issue and resolve it.**
* **With our continuous effort and commitment, we have elevated our Coverity compliance rate from 97% to 100%.**

**DIGITAL\_LED GROWTH**

**Automated Coverity pipeline**

Automated the DWR Coverity scans by creating the Coverity pipeline from scratch. We have used the docker image having the latest Coverity artifacts as well as Websphere 8.5 server from SRES and mirrored the TFS git branch to gitlab branch.

Configured different jobs in the pipeline with does scan weekly as well as when developer merges its code to develop branch of TFS git the mirror repo will mirror the code to gitlab, builds the code and do the scan and publish the result in DWR Coverity portal against DEV-Stream.

Manual Coverity scan on an average took 1.5-2 hour to get completed and publish in portal. In every sprint, we have to do minimum 3 dev scan (after each merge from feature) and 2 UAT scan after each CR merge(to release). Total time taken earlier was 10 hours per sprint which has been significantly reduced to less than an hour as developer doesn’t need to invest anytime for scans.

**Created a DWR Azure pipeline for DWR build and deployment**

Setup an Azure pipeline in TFS-GIT for the CI process. Created various task like Ant and publish artifact which based on the triggers take the latest code build it and publish it to the local registry of Azure.

CD\_setup- We create a release pipeline which has Artifacts and Stages. Artifacts takes the publish artifact build in CI process and based on trigger will creates a release every time we have a new build.

We have also defined stages in our release pipeline which define our release strategy what we are going to do with our artifact and where we are going to deploy it. In our case we are going to deploy it into WAS server.

Savings:

Manual build and deployment in DWR took 20-25 mins. With CI/CD in place the build and deployment are automated and will not require any developer time and hence we save almost 20 min per deployment and which in turns saves 3-4 hrs per sprint.

**Parallel work**

1) Analyzing the cloud adoption scenario for DWR. Setting a CI/CD pipeline for DWR build and deployment.

2) Containerizing the DWR build with help of docker image and containers so that all DWR dependency and code is package and ship together which can run in any env without different scripts.

**Other activities:**

1) Part of DevSecOps team and coordinated with 3 IT&DA product manager to complete their assessment.

2) Part of core team engagement activity group under Srini. Help in organizing the teams and game for the event.

**Q2)** Which strengths and capabilities are you most focused on developing? How do you plan to continue developing them to succeed in the future?

ANS)

The strength and capabilities that I am most focused upon is broadening my skills in different areas like devOps and core tech skills development.

* Focused on core learning of Docker and Kubernetes which has enriched my skills in devOps.
* Along with the domain learning I am also focused on enhancing my skills by taking up multiple courses on Plural-sight. Already completed Spring fundamental in Java, Design pattern in java and working on Spring MVC and Spring boot courses.
* Planning of pursuing MTech in data science and eng from BITS Plani WILP program.
* Helping freshers take the ownership of the module. Working with them closely and reviewing their code and helping them adopt best practices while writing their code and building their confidence for giving demo in front of stakeholders.
* Mentoring the freshers by providing adequate time and KT and slowly bringing them to speed. Guiding them on professional and personal aspect to make their journey memorable in Boeing.

**Q3**) How have you demonstrated the Seek, Speak & Listen habits in your daily work?

ANS)

Seek, Speak & Listen habits is by default integrated with the work I do daily.

**Seek** - During aircraft configuration report creation CR seek help from users in understanding their small requirement as well so that we don't miss any.

**Speak**- During every meeting either its related to project or generic meeting. I always speak my mind and never hesitate to speak. Whether its sprint planning, roadmap, retrospect or team building activities meeting I always put forward my points and suggestion.

**Listen** - Listening resolves more problems than speaking.

As I am working with freshers my more focus is listening to their thought and doubts about the application and making them comfortable with their work.

**Q2 ROADMAP**

* **Integration and module testing of Aircraft configuration user story in develop and UAT as well as successful deployment.**
* **New feature development for Stamping panel for Aircraft Queue module in DWR.**
* **Ant to Maven migration for DWR projects.**
* **Analyzing the scope for EJB to Spring migration for DWR.**
* **CI/CD setup in DWR.**

“*Flight Test Operations (FTCS, FT-MIST and DWR) and Flight Test Support apps (TPERT-E and TWS) are critical in supporting the ongoing 737-10 flight testing leading it up to the FAA certification tests. There were 9000+ Discrete Work Requirements created using DWR application to instrument the 1G001, 1G002 and 1G003 flight test airplanes to get them ready for flight testing. The 390+ Test Item Requirements List (TIRLs) that were created in FTCS along with 1500+ Test Operations Documents (including Plan of Test, Sequence and Test Info Sheet) were used and are being used to successfully execute the 737-10 Flight tests. Three Week Schedule (TWS) application helped the Test Program managers plan, schedule and manage the 737-10 flight test program*









