JIRA for Agile Project Management Process

Quality and Reliability

- With an Agile Style of Project Management, Individuals focuses on the Tasks
- Jira is a software tool to easily manage the Tasks and visualize how the Tasks integrate into the common goal
- Jira focuses on the Tasks and not the Schedule, the Tasks define the Schedule.
- The Project is divided into components called versions. The Project Team define Tasks for each system and focuses on resolving the Task using proven problem solving techniques such as Kanban and Agile Sprints.
- Jira is an open source program which uses a large variety of add-ons such as WBS Gantt which shares data from the Tasks in order to produce a Gantt Chart.
- Jira will easily link into WARP, WWW, & Confluence. API's exist for exchanging data real time in WARP.

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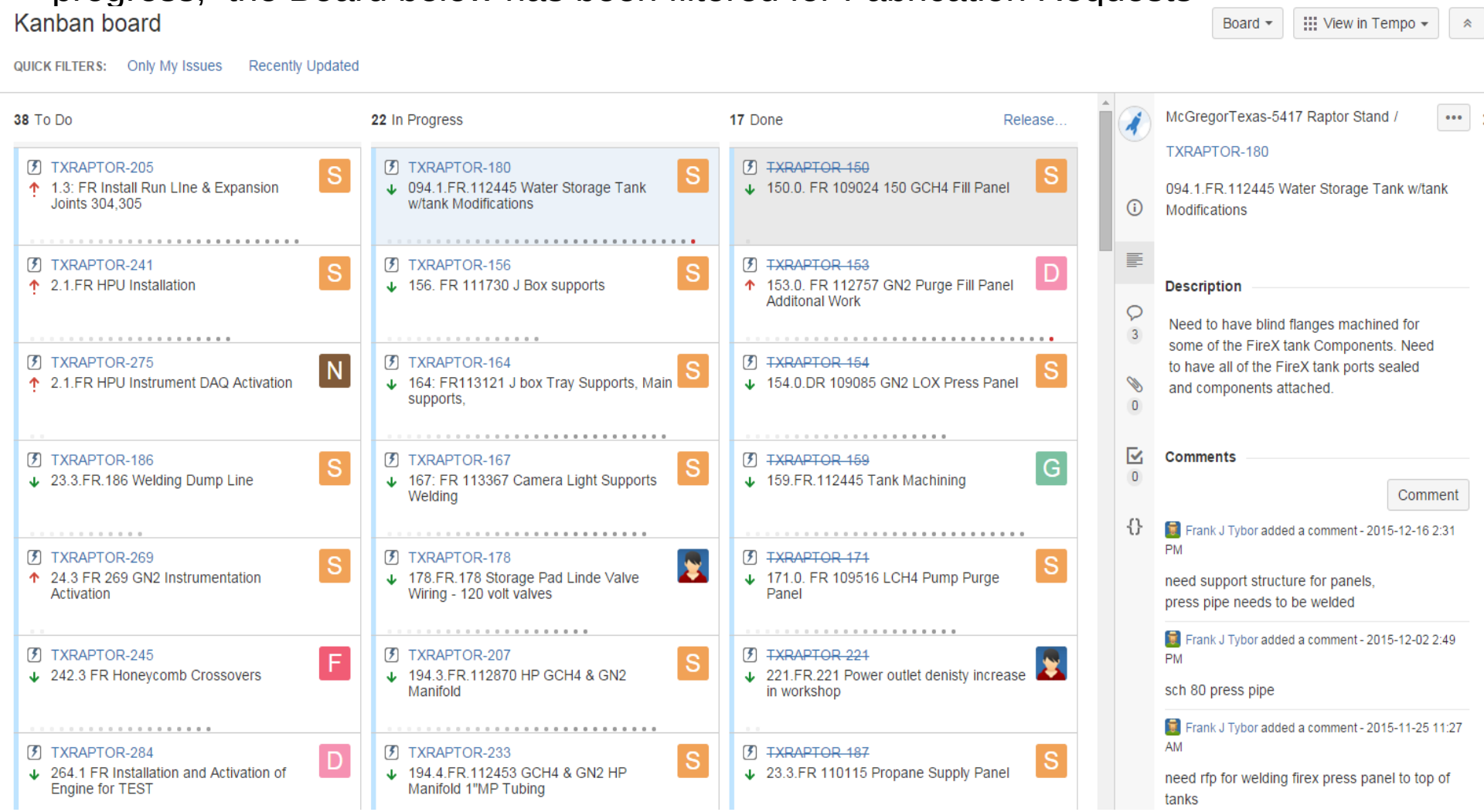
Kanban Boards are created for filtered Tasks in order to set priorities and track progress, the Board below has been filtered for Fabrication Requests



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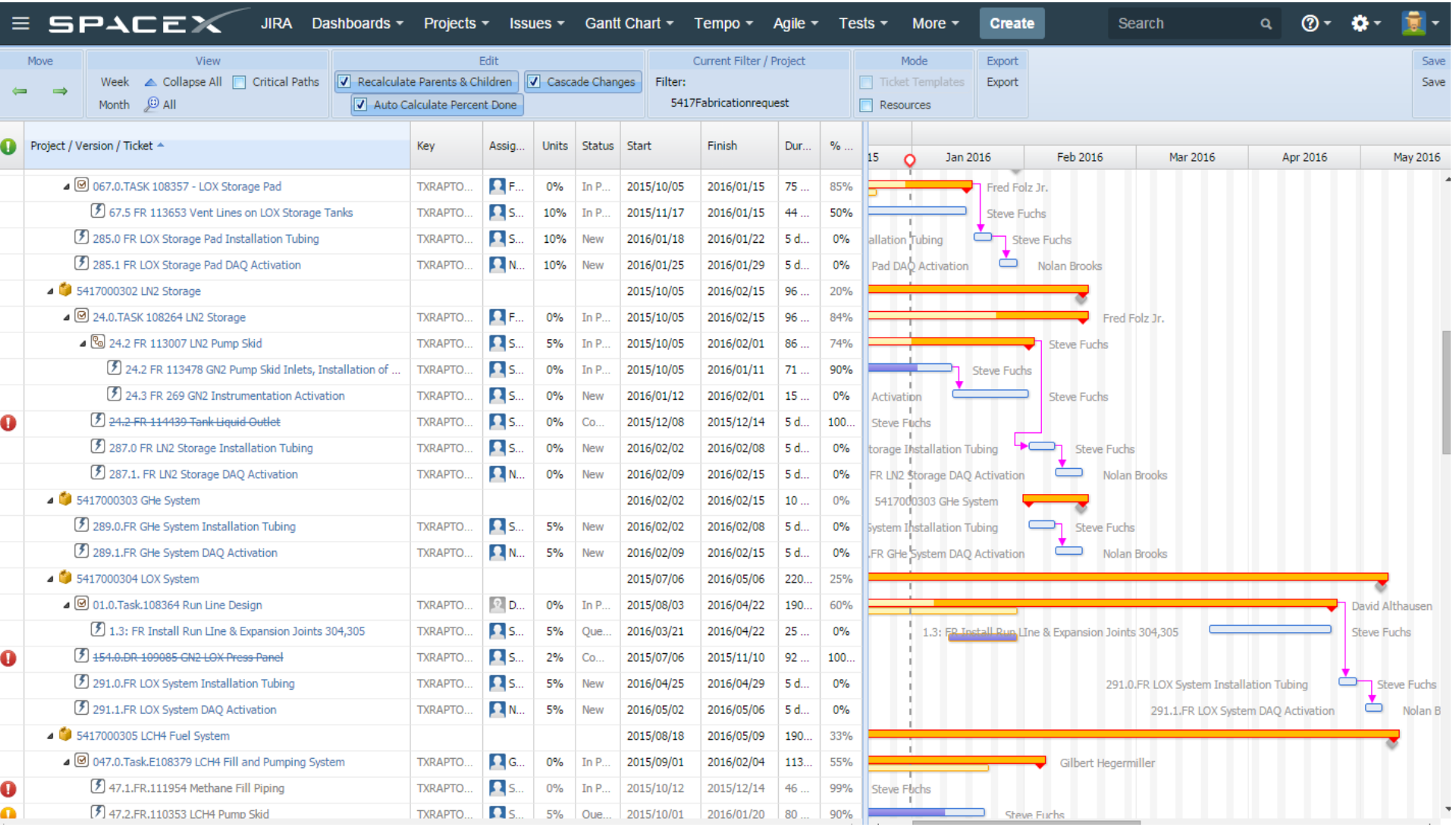
The filter tasks can then be shown in WBS in a Gantt format. The Data from the Tasks are automatically shared. WBS Gantt can also be used to create Task.



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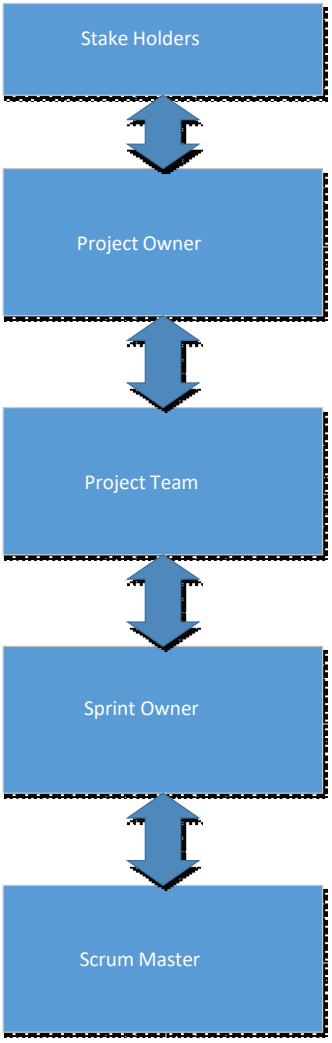
JIRA Agile Personnel



The Stakeholders are the management group which control the available resources for the Project

The Project Owner is the Expert on the Project and the Stack Holders needs and priorities

The Project Team are the group of Project Engineers, Supervisors, Controls, Purchasing, Quality, Planning and anyone else who has a hand-on role in the Project.

The Sprint Owner is the person responsible for implementing the assigned system of the work Plan, generating the List of Issues with subsequent specific iterations goals and tasks

The Scrum Master is responsible for supporting the development team, clearing organizational roadblocks and Keeping the Agile process consistent. A Scrum Master is sometimes called a Project Facilitator or Project Integrator

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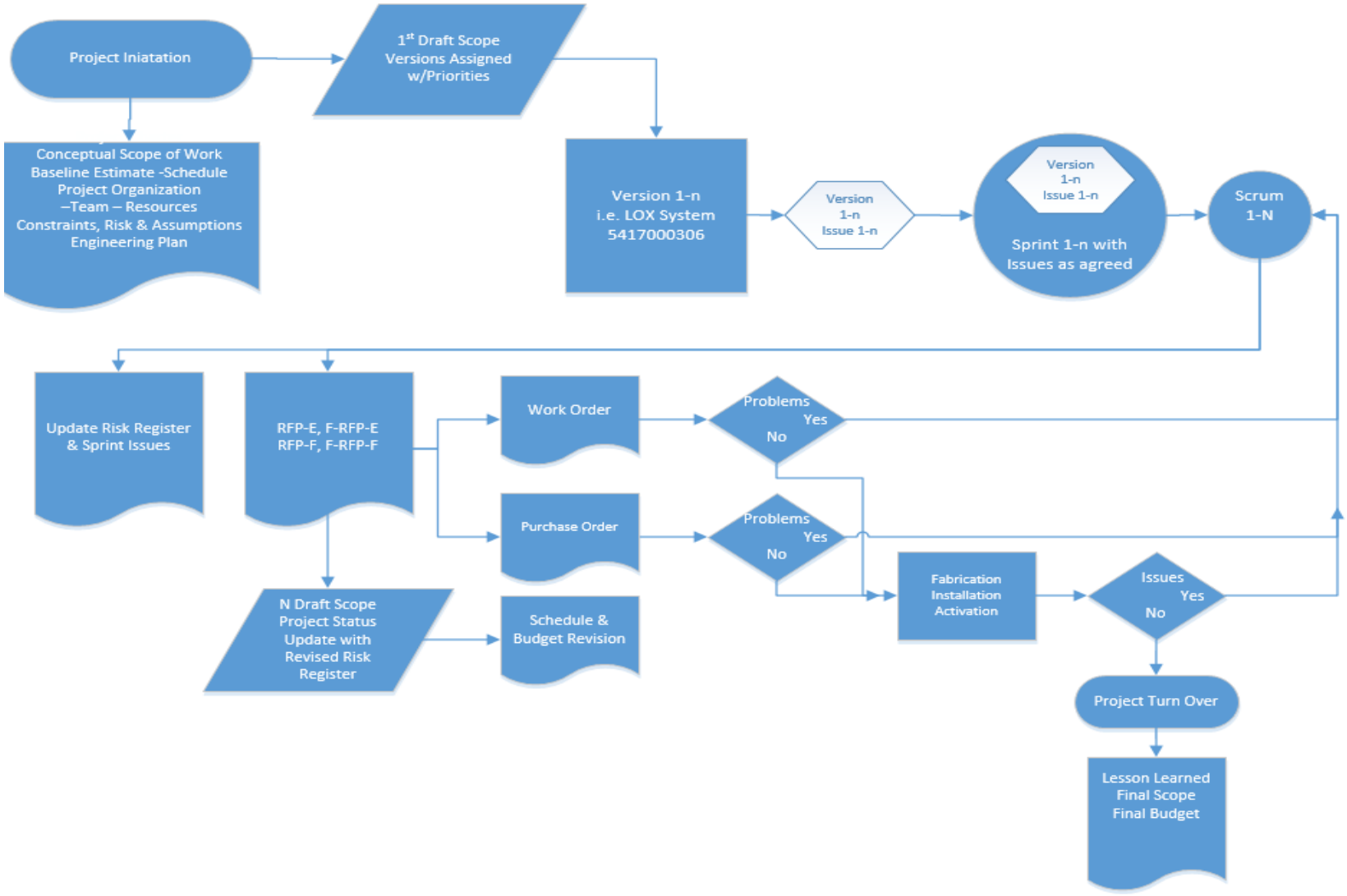

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JIRA Agile Data Reporting

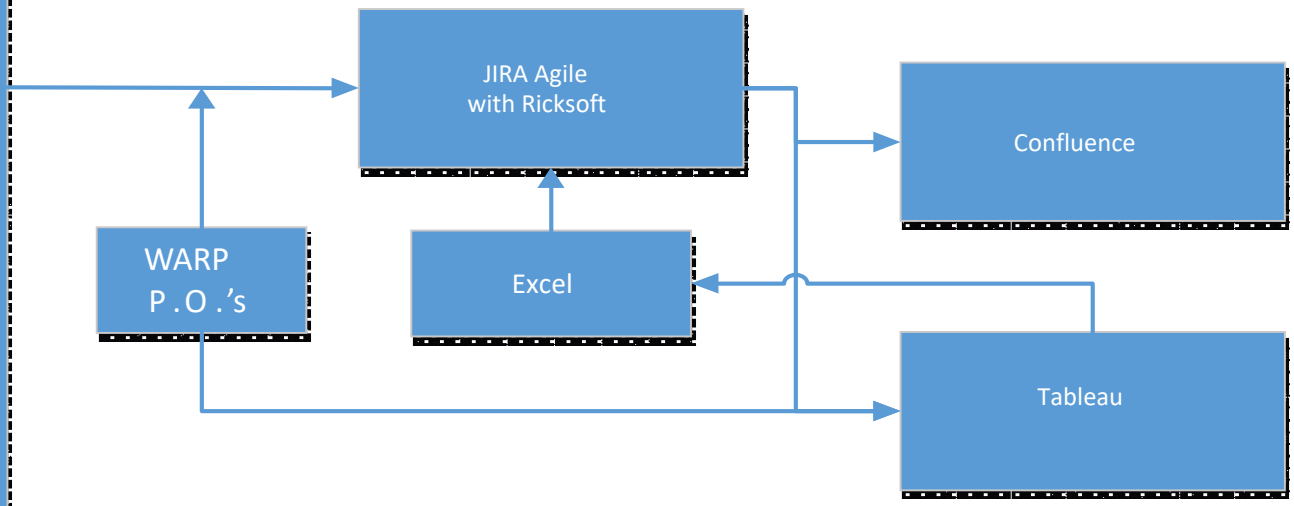
Summary of Deliverables

PROJECT INITATION
Project Charter
Conceptual Scope of Work
Project Organization Team
Engineering Plan
Constraints , Risk & Assumptions
Project Status Update
Schedule
Resources Allocation
Budget Estimate

SCRUM
Sprint Issues
RFP -E RFP -F
Work Order via Warp
Purchase Order via Warp
Update Scope
Update Schedule
Update Budget
Update Risk Register

PROJECT TURN OVER
Lessons Learned
Final Scope
Final Budget

Tools



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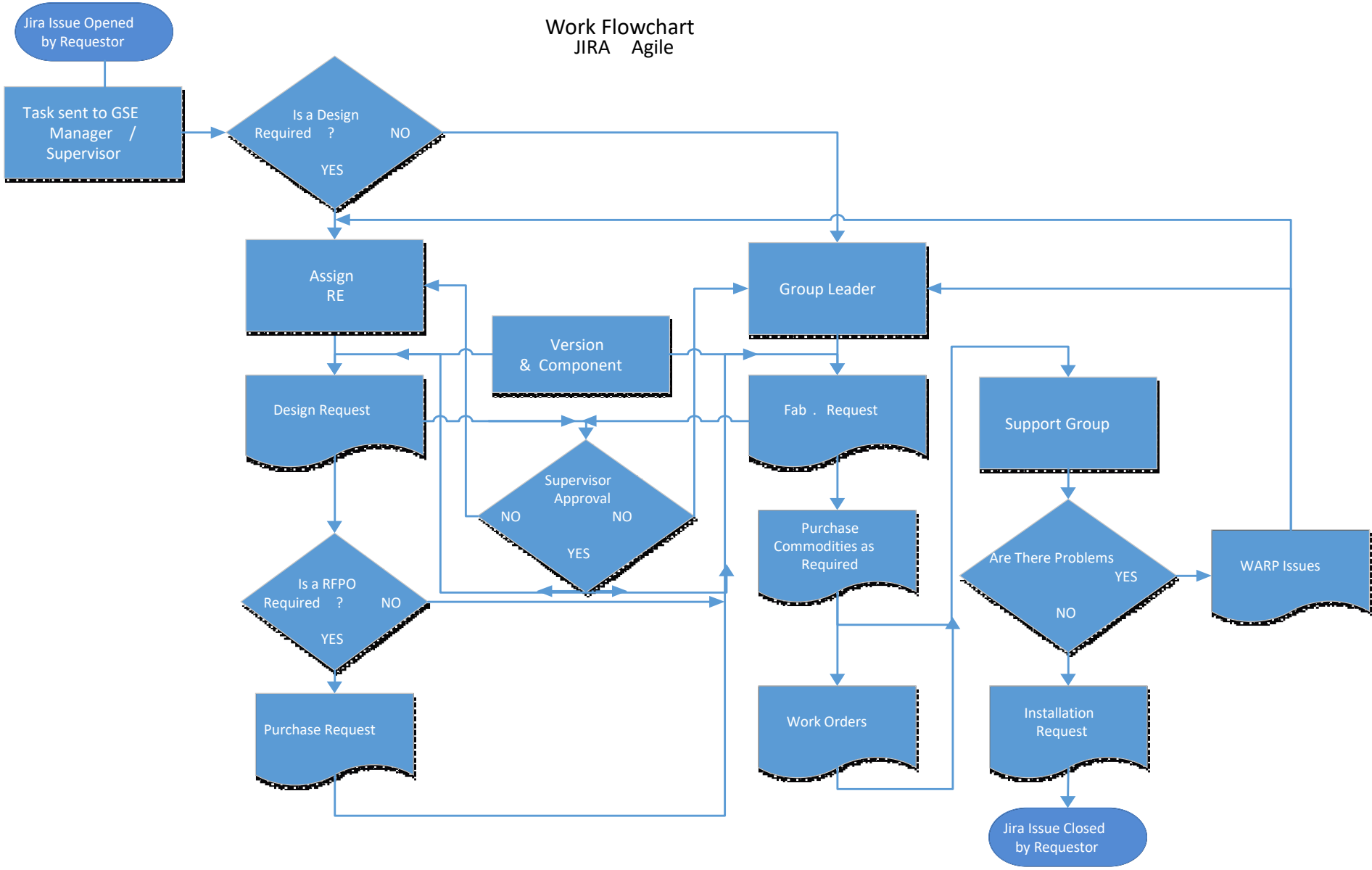

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Definitions:

1: Projects: Collection of work activities referred to as Issues.

2: **Issues: "**JIRA tracks issues, which can be bugs, feature requests, or any other tasks you want to track." For our purposes Issues will be work that needs to be done.

3: Issue Types: There any many type of issues, custom issue types can be created. We will use the following four Issue Types:

3.1**: Task**: An assignment or request for work. We will use the task as the Issue Requests or the Request for Work**.** The Issue Requests is the initial document which starts the work process. The requestor will complete a **Task Issue** as described in the example.

3.2: **Design Request**: DR- A request from the user for design work

3.3: **Fabrication Request**: FR- A request from the user for fabrication work

3.4: **Deliverable: EPO – A** Engineering Procurement Request which for our purposes a Deliverable is an item covered by an RFPO in WARP.

4: Components: Work Areas, i.e. Design, Purchasing, Fabrication, Installation. Components are used for filtering purposes used for the Kanban and Sprint boards.

5: Versions: Milestones in the project best defined as systems, i.e. Structures, Fluids.

6: Parent-Children Relationships:

6.1: Parents are tasks or subtasks.

6.2: Children are Design, Engineering Procurement or Fabrication Requests

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7: **GSE Manager**: The GSE Manager is the person who initiates or received the request for an Issue, i.e. Build New West Gate. The GSE manager decides if a GSE Design is required or not or forward the Issue Request It is envisioned the Issue Request will be an email sent to the GSE Manager with supporting documents as necessary.

8: **GSE Supervisor**: The GSE Supervisor assigns the Responsible Engineer to the TASK and/or approves the Design and Fabrication Request.

9: **Requestor:** Is the person creating any of the Issue types.

10: **Assigned RE:** The person to whom the Issue has been assigned to.

11**: WARP Work Orders or WARP Issues:** Warp Work Orders or Warp Issues can be tracked in JIRA by creating Links between the JIRA Issue and the Warp W.O. or W.I. For example a Fabrication Request has resulted in a Warp Issue, by using JIRA as communication regarding this issue is resolved. Also the WBS schedule will reflect the proposed completion date.

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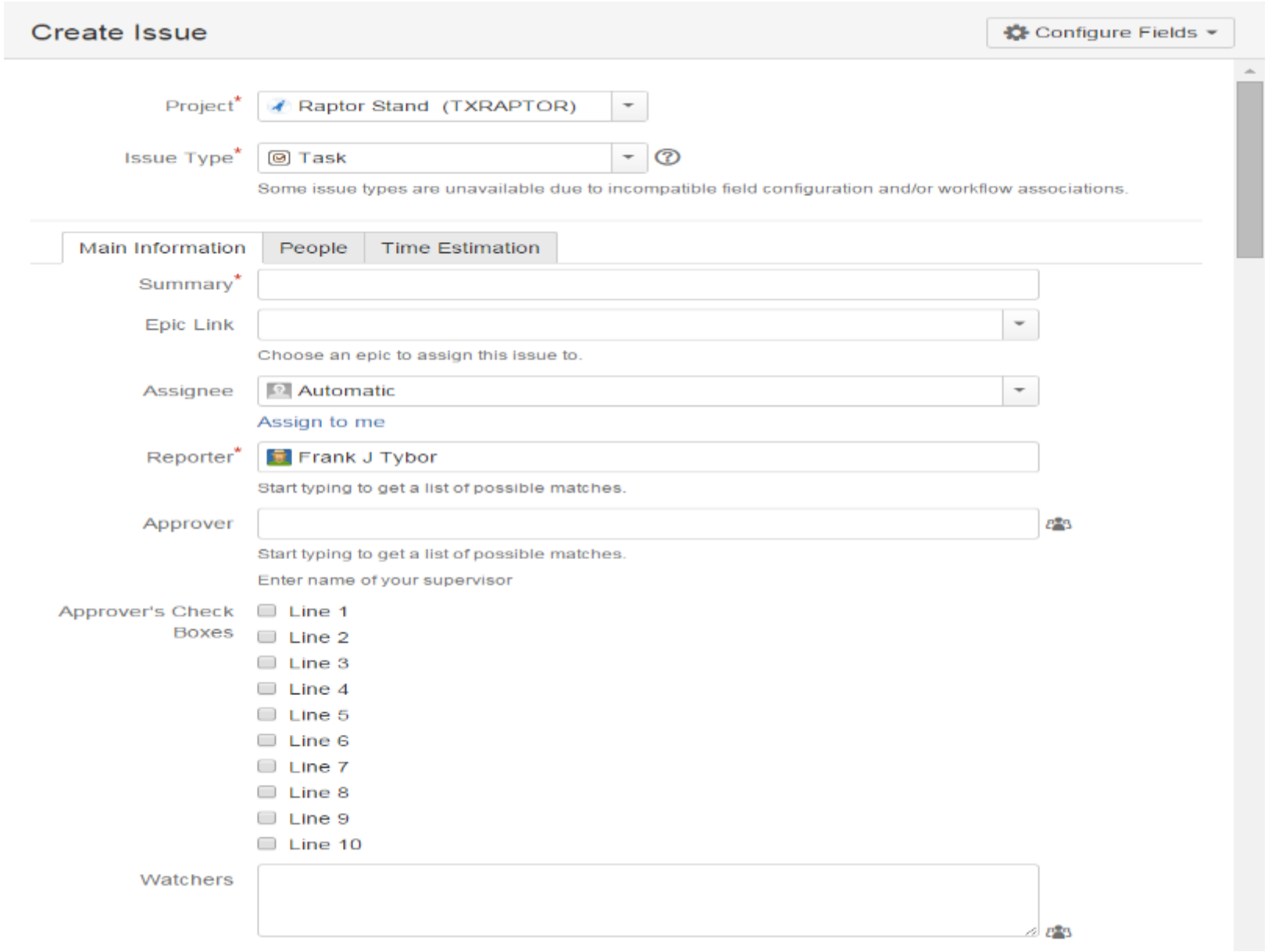

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For details on the Value Driven Design visit: https://en.wikipedia.org/wiki/Value-driven_design

Value-driven design (**VDD**) is a systems engineering strategy based on microeconomics which enables multidisciplinary design optimization. Value-driven design is being developed by the American Institute of Aeronautics and Astronautics, through a program committee of government, industry and academic representatives.[1]

In parallel, the US Defense Advanced Research Projects Agency has promulgated an identical strategy, calling it **Value centric design**, on the F6 Program.

The essence of these strategies is that design choices are made to maximize system value rather than to meet performance requirements.

This is also similar to the *value-driven* approach of *agile software development* where a project's stakeholders prioritize their high-level needs (or system features) based on the perceived business value each would deliver.[2]

Value-driven design is controversial because performance requirements are a central element of systems engineering.[3] However, value-driven design supporters claim that it can improve the development of large aerospace systems by reducing or eliminating cost overruns[4] which are a major problem, according to independent auditors.[5]

Value-driven design creates an environment that enables and encourages design optimization by providing designers with an objective function and eliminating those constraints which have been expressed as performance requirements.

The objective function inputs all the important attributes of the system being designed, and outputs a score. The higher the score, the better the design.[6]

Describing an early version of what is now called value-driven design, George Hazelrigg said, "The purpose of this framework is to enable the assessment of a value for every design option so that options can be rationally compared and a choice taken."[7]

.[6]

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Agile Reference Cont.

At the whole system level, the objective function which performs this assessment of value is called a "value model."[8] The value model distinguishes value-driven design from Multi-Attribute Utility Theory applied to design.[9]

Whereas in Multi-Attribute Utility Theory, an objective function is constructed from stakeholder assessments,[10] value-driven design employs economic analysis to build a value model.[11]

The basis for the value model is often an expression of profit for a business, but economic value models have also been developed for other organizations, such as government.[8]

To design a system, engineers first take system attributes that would traditionally be assigned performance requirements, like the range and fuel consumption of an aircraft, and build a system value model that uses all these attributes as inputs.

Next, the conceptual design is optimized to maximize the output of the value model. Then, when the system is decomposed into components, an objective function for each component is derived from the system value model through a sensitivity analysis.[6]