

Order Processing



Work in progress

Target release	Release 1 or later
Epic	Student will be able to run a full order execution process supported by a GUI on site level and other appropriate command tools (or GUI) at the other layers.
Document status	DRAFT
Document owner	Ralf Banning
Designer	Ralf Banning
Developers	
QA	

Goals

- Offer interesting logistical experiments to students, here: plan, release and execute the order processing.

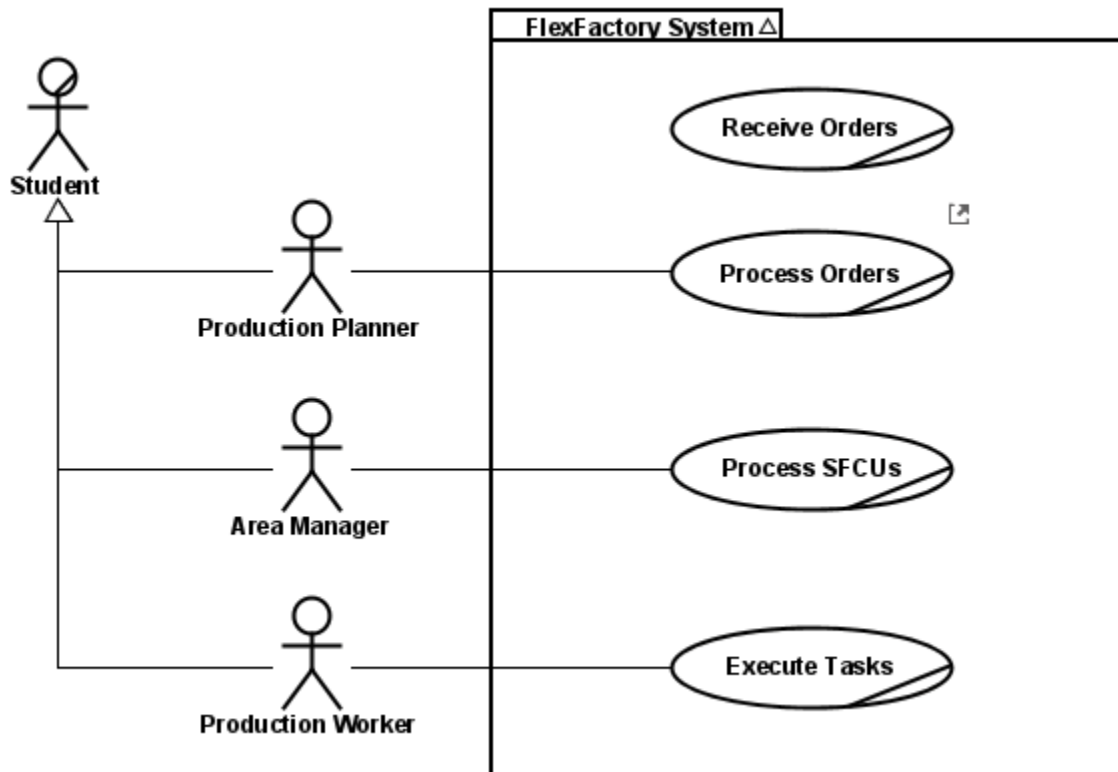
Background and strategic fit

See [Why flecsimo?](#)

Assumptions

- Orders will be provided from external systems or the order data is provided by the simulation manager (e. g. lecturer or lab-engineer)

Requirements (Use Cases)



#	Title	Use Case	Importance	Notes
OP-1	Receive Orders		Optional	
OP-2	Process Orders	A Production Planner accepts or creates a new production order checks its feasibility and plans the location and schedule to process it.	Must have	
OP-3	Process SFCUs	An Area Manager controls the processing of assigned Shop floor Control Units (SFCU's)	Must have	
OP-4	Execute Production Tasks	One or more Production Worker execute or support assigned Production Tasks within a manufacturing cell	Must have	

User interaction and design

UC: OP-2 Process orders		
A Production Planner accepts or creates a new production order checks its feasibility and plans the location and schedule to process it.		
Pre	A new Production Order has been received.	
Post	The Production Order has been released, and the corresponding information on the to-process Shop floor Control Units (SFCUs) has been distributed to the planned production areas (shops).	
Step	Actor intention	System responsibility
1	The Production Planner selects the "Process Order" view and selects the "check" function.	The System shows a list of all new / unchecked Production Orders.
2	The Production Planner selects one or more Production Order for "Check".	The Systems checks if the data is feasible to process, i.e. if the required Production Data Specification is known to the system.
3	The Production Planner starts planing of the location (area /shop) and the time schedule for the execution of the Production Order in the system.	The system computes and offers the feasible planning alternatives.

4	The Production Planner selects a Planning alternative and releases one or more Production Orders.	The System changes the Production Order status to "Released" and generates the corresponding Shop floor Control Data (including the required Production Data Specification) and transfers the data to the selected location
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Alternatives and notes

4A	[Data not feasible] tbd	
5A	[No feasible planning alternative found] tbd	
7A	[Planning alternatives not acceptable] tbd	

⚠ **Note:** both, success as problems have to be logged, any state change of the process has to be logged.

User Interaction

The wire frame shows the above use case in step 7. The user interaction could be like:

- Select the "Process Order" View
- Select the Menu entry on the side bar
- Select one or more Production Orders.

You may step through the use case by stepping through the pages of following wire frame specification:

FlexFactory SITE FUAS1

Navigation: Inbox | **Process Order** | Monitoring | ...

Left Sidebar: Check | Plan | **Release** | ...

Releasable Orders Table:

Release	Order	Product	Qty	SCHED	Area
<input type="checkbox"/>	1000021	Hobgoblin Blue	2	2020-10-01	???
<input checked="" type="checkbox"/>	1000034	Hobgoblin Green	5	2020-10-02	FA01
<input type="checkbox"/>	1000035	Bycycle MTB Type FR56	1	2020-10-02	
<input type="checkbox"/>					
<input type="checkbox"/>					

Release Button: **Release**

Questions

Below is a list of questions to be addressed as a result of this requirements document:

Question	Outcome
No question yet	

Not Doing

- For first release no order editing or re-start will be possible
- No "Housekeeping" is planned for the first release, i. e. orders may not be deleted via the GUI.