

USER STORIES AND FUNCTIONAL REQUIREMENTS

[Minimum req 1]: The system must allow defining products: sizes, colors, finishes, grades etc. For example a bike has a Frame Size (18, 21, 26, etc.), a Color (Blue, Red), a Finish (Matt, Chrome), a Grade (Aluminium, Steel, Carbon).

[1.1] As the product manager, I want to be able to set the specifications of bikes in terms of size, color, finish and grade, so that the customer has a specific scope of bike options to choose from. [Story points: 8 Priority: High Risk: Medium]

[1.1.1] As the product manager, I want to add the color of the bicycles, so that customers can see the color of the bicycles. [Story points: 2 Priority: High Risk: Medium]

[1.1.2] As the product manager, I want to add a list of bicycles parts in the manufacturing employees dashboard, so that the manufacturing worker can know the list of bicycles parts. [Story points: 3 Priority: High Risk: Medium]

[1.1.3] As the product manager, I want to add the color of listed bicycle parts, so that the manufacturing worker can know the color of bicycle parts. [Story points: 3 Priority: High Risk: Medium]

[Minimum req 2]: The system must allow creating, editing, and tracking material lists, which define what other parts are needed to assemble/create a product. A part itself may have its own material list. For example, a bike Seat is itself composed of a Rawhide Ornament, Springs, Frame, etc.

[2.1] As the inventory person, I want to track the list of necessary bicycle materials, so that I know what materials are needed to create a bicycle or a part of a bicycle. [Story points: 8 Priority: High Risk: High]

[2.2] As the product manager, I want to create the list of necessary bicycle materials, so that I know what materials are needed to create a bicycle or a part of a bicycle. [Story points: 5 Priority: High Risk: High]

[Minimum req 3]: The system must allow tracking inventory, which contains the numbers of things in the plants available and necessary to create parts and products. The inventory depends on a location, current orders, backlogs, forecast of production, etc.

[3.1] As an inventory guy, I want to add the available quantity of each listed part, so that the manufacturing worker can know the quantity available of certain parts. [Story points: 3 Priority: Medium Risk: Low]

[3.2] As a bicycle manufacturing worker, I want to know what parts/materials are needed and availability to make a bicycle, so that I can assemble a bicycle without any confusion. [Story points: 5 Priority: High Risk: Medium]

[3.3] As an inventory person, I want to know the backlog of materials order, so that I can have a clear idea of how many parts will be available in future and what are the pending tasks. [Story points: 5 Priority: Medium Risk: Low]

[3.4] As a bicycle manufacturing worker, I want to know the deadline for backlog materials order, so that I can efficiently organize bicycle productions. [Story points: 2 Priority: Medium Risk: Low]

[3.5] As an inventory person, I want to know when the next bicycle materials will be available if there are none in stock, so that I know when the purchase of materials can be made from the vendor. [Story points: 5 Priority: Medium Risk: Low]

[3.6] As an inventory person, I want to know the amount of items available in inventory so that I can have a minimum and maximum ordering level. [Story points: 5 Priority: Medium Risk: Low]

[3.7] As a shipping clerk, I want to be able mark backlog orders as received, so that the inventory person knows when the backlog orders have arrived. [Story points: 3 Priority: High Risk: Medium]

[Minimum req 4]: The system must allow defining, ordering, and tracking raw material and final products. Possibly, it should allow optimising production (use of machines, time of use, etc.).

[4.1] As the inventory person, I want to be able track raw material and final products, so that I can make a list of items I need to build bicycles and keep track of finished bicycles. [Story points: 8 Priority: High Risk: Medium]

[4.2] As the inventory person, I want to be able to preorder bicycle materials if there is no stock available, so that I can receive the parts as soon as possible. [Story points: 8 Priority: Medium Risk: Medium]

[4.3] As an inventory guy, I want to add the amount of completed bicycles, so that customers can know how many bicycles are available. [Story points: 3 Priority: High Risk: High]

[Minimum req 5]: The system must allow following all and any cost: Accounts Payable, Accounts Receivable, and Cost/Charge Number.

[5.1] As an accountant, I want to be able to track payments to others and payments received from others, so that I can produce a financial report. [Story points: 5 Priority: Medium Risk: Low]

[Minimum req 6]: The system can connect to production machinery via different communication modes, including but not limited to Web services, COM ports, and CSV/XML format files.

[6.1] As a manufacturing worker, I want to be able to see the status of all the manufacturing machines from the ERP Interface, so that I don't have to check each machine individually. [\[Story points: 5 Priority: Medium Risk: Low\]](#)

[Minimum req 7]: The system should track quality data. It needs to support manually triggered rules and-or system generated rules. [\[Story points: 5 Priority: Medium Risk: Low\]](#)

[7.1] As an accountant, I want to receive confirmation email for completed order payment, so that I can be sure my payment was received by the recipient (bicycle manufacturing company). [\[Story points: 5 Priority: Medium Risk: Medium\]](#)

[Minimum req 8]: The system should allow only registered users to access the information, possible with different accesses for different roles.

[8.1] As an IT Personal, I want to be able to create accounts for all the different types of users, so that each department has the correct type of access to the ERP system. [\[Story points: 5 Priority: High Risk: High\]](#)

[8.2] As an ERP user, I want to login securely, so that I can access the appropriate interface without putting my credentials in jeopardy. [\[Story points: 3 Priority: High Risk: Low\]](#)

[Minimum req 9]: The system must generate logs and audit trails for the sake of debugging and accountability.

[9.1] As an IT personal, I want to see logs of the system, so that I can monitor activity in the system. [\[Story points: 5 Priority: Medium Risk: Low\]](#)

[Minimum req 10]: The system can generate documents, like reports, in different formats, including MS Excel spreadsheets and Adobe PDF. It can also link to some Cloud storage service, e.g., Google Drive, to push/pull documents there.

[10.1] As an accountant, I want to see sales reports, so that I can plan the sales reports. [\[Story points: 5 Priority: Medium Risk: Medium\]](#)

[10.2] As an accountant, I want to export sales reports in PDF or MS Excel format, so that reports can be easily analyzed and printed. [\[Story points: 2 Priority: Low Risk: Low\]](#)

[Minimum req 11]: The system should follow “good” UI principles, like help, tooltips, etc.

[11.1] As an ERP user, I want to interact with help buttons, so that I can navigate the system with ease. [\[Story points: 5 Priority: Medium Risk: Low\]](#)

[Minimum req 12]: The system should take less than 5 seconds to load (on localhost), and no more than 10 seconds in normal network condition (on the cloud).

[12.1] As an ERP user, i want to have my personal information and credentials encrypted so that i have some security. [\[Story points: 5 Priority: high Risk: Low\]](#)

[Minimum req 13]: Sensitive data must be encrypted (credential details, personal information), so in case of a data leak, the leaked information can not be traced back to any identity or user.

[13.1] As a user, I want the system to automatically log me out after a time of inactivity so that no one who doesn't have the authorization will be able to access the information that i have access to if I forget to log out.[\[Story points: 5 Priority: high Risk: Low\]](#)

[Minimum req 14]:

N/A

[Minimum req 15]

N/A

[Minimum req 16]:

N/A

[Minimum req 17]: The system sends e-mails to certain roles according to certain rules depending on events occurring within the system, e.g., production stopped.

[17.1] As a product manager, I want to receive email for the bicycle production disruption, so that I can know the different hindrances of the production team and take necessary actions. [\[Story points: 3 Priority: Low Risk: Low\]](#)

[17.2] As a product manager, I would like to receive a notification or notice when certain sales surpass a large amount so that I am aware of a big order. [\[Story points: 3 Priority: Low Risk: medium\]](#)

[17.3] As an inventory manager, I would like to receive a notification or notice when parts and/or materials quantity are low, so that I know when to order more. [\[Story points: 5 Priority: high Risk: high\]](#)

[Minimum req 18]:

N/A

REQUIREMENTS NOT CLASSIFIABLE BY THE ABOVE MINIMAL REQUIREMENTS

Planning:

[PI.1] As a product manager, I want to add a certain amount of new bicycles to build this year, so that the manufacturer worker knows which jobs to work on during the year. [Story points: 5 Priority: High Risk: High]

Scheduling:

[Sc.1] As a product manager, I want to know what machine operates and when, so that I know how many parts can be produced and how much it costs. [Story points: 5 Priority: low Risk: medium]

Quality Management

[Q.1] As the quality control manager, I want to track the defects in the assembling line, so that I can make sure the bicycles being produced and sold are not defective. [Story points: 3 Priority: High Risk: High]

[Q.2] As the quality control manager, I want to check the quality of parts and materials bought, so that I can ensure the parts and materials used are not defective. [Story points: 3 Priority: High Risk: High]

Packaging

[P.1] As a shipping clerk, I want my own UI, so that I have a designated place to manage the packaging and shipping methods. [Story points: 3 Priority: Medium Risk: Low]

Transport Planning/Shipping

[T.1] As a shipping clerk, I want to be able to choose the transportation method that is used, so that the sales can be delivered within the required time frame. [Story points: 5 Priority: High Risk: High]

[T.2] As a shipping clerk, I want to know when the shipment of bicycle sales encounters delivery issues, so that I know when to take actions to ensure proper arrival of bike sales. [Story points: 3 Priority: High Risk: Low]

Sales (Customers):

[Sa.1] As a sales manager, I would like to enter sales orders in the system, so that we can make sales. [Story points: 5 Priority: High Risk: High]

NON MINIMAL REQUIREMENTS USER STORIES

[NMR.1] As an ERP user, I want to be able to search for specific items so that it is much more efficient to find items. [\[Story points: 3 Priority: Medium Risk: Low\]](#)

[NMR.2] As an ERP user, I would like to write and receive messages from other users, so that I can effectively communicate with my coworkers. [\[Story points: 3 Priority: Medium Risk: Low\]](#)

Types of ERP Users

Type	Associated feature	Accessible pages	Role/Purpose/Permissions/Description
1. Product Manager	Planning + Scheduling	Inventory	<ul style="list-style-type: none">- Define what types of bicycles are being made and what materials are being used.- More on the “managerial” part.- Manages what is in the inventory page
2. Inventory person	Production	Inventory	<ul style="list-style-type: none">- Check the inventory, if it's low on stock (parts and materials), they order more.- Does not have privilege to create bikes, materials or parts
3. Manufacturing worker	Production	Jobs, Assembly	<ul style="list-style-type: none">- The ones building the bikes.- Will check the ERP system and will see a list of what needs to be built (Job page)- Updates status of job (complete, queued, etc)
4. Accountant	Accounting	Accountant	<ul style="list-style-type: none">- Takes care of finances (can see sales and orders)
5. IT Personal	N/A	User management	<ul style="list-style-type: none">- Highest admin.- Only one that can create new accounts.- Can view the list of logs
6. Sales person	Sales	Sales	<ul style="list-style-type: none">- In charge of selling our bikes (by adding new sales)
7. Quality control	Quality Management	Jobs	<ul style="list-style-type: none">- Check that everything is doing what it is supposed to, i.e. checking if email was sent, if database has been changed, etc.- Track the defects in the jobs line (next to each job, there is a column that shows the quality of the job and they can change the status of the quality)
8. Shipping clerk	Packaging + transport	Shipping	<ul style="list-style-type: none">- Marks each order as received which updates the material quantity in inventory page