IGP

Description: IGP is an ecommerce company with operations across 50 facilities. A key differentiator for IGP is selling personalized gift items. As an example, we sell products like pens, wallet, bags, tee shirt with artwork on them.

Mission:

• Use technology as a key lever to drive a step change in consumer experience as well as their long-term behaviour in our category

• Be master curators to ensure that our customers genuinely find something of value every time they visit us.

• Create enhanced gifting specific logistics & backend solutions to provide our customers with a 'wow' experience on the last (and the most crucial) mile

• Be thought leaders in personalization to provide our customers with that much-needed personal touch in all the gifts they send & receive.

Goal

To design a solution/process for warehouse team members to solve their pain points and improve work efficiency.

Clarifying Questions:

1. Order sheet is printed – means it will be a physical copy
2. Is there a way in current process where in which orders are assigned to particular warehouse?
3. Does every warehouse has its own set of printing and specialized machines or it is operated centrally?
4. Is there any current process through which warehouse team members understand which order to be taken on priority?
5. Are 50 facilities closely located or across India or even at different parts of world?

Assumptions & understanding

1. Assuming that the order sheet is a paper consist of following details
   - Actual Product Selected (Image)
   - Product design customized by user (Image)
   - Order id(numeric)
   - Warehouse number (assigned to which facility)
   - Price
   - Delivery date
   - Delivery address
   - Payment status

2. Assuming designer, machines & operator, warehouse manager can have different cabins/store where they can operate for their work

3. Assuming that there are different machines for printing of different products like t-shirts, pen, mug and so on.
4. Assuming that every facilities has machines and such team to work.
5. Assuming that quality check is done manually for products(physically)
6. Assuming that post quality check it is shared with warehouse manager who takes care of packaging and delivery.
7. Assuming that the metrics improved will be the delivery experience and quality of product for the customers

Competitors - IGP

1. Fern and petals
2. Winni
3. Floweraura
4. Archiesonline

Customer segment

1. **Designer –** Customer who receives the order sheet first and replicates/creates the design in photoshop as per buyer (user who places order) design on product.
2. **Operator –** Customer who receives the photoshopped design from designer and operates machinery to print it on Product**.**
3. **Quality checker –** Customer who checks the physical goods and design printed on it through operator and confirms it on par with order sheet image.
4. **Warehouse Manager –** Customer who dispatches final approved order on time but is highly dependent on process 1,2,3 mentioned above.

Customer Segment Pain points:

Designer	**Operator**	**Quality Checker**	**Warehouse Manager**
It's very difficult to keep track of order sheets as they are loose papers	I find it hard to figure out which orders I should do first	Confusion on order sheet linked to product due to piling up	To make sure that every order is delivered on time everyday
I end up skipping some orders for which I am penalized.	It's not easy to operate the machine and keep track of order sheets lying near the machine	Difficulty to prioritise piled up products for QC	To reduce time for finding an order ready for delivery
I have too much workload and I don't know which orders to process first.	Operating a machine is not easy and lots of time it breaks down	Handling too many products coming up for Quality check	I should be able to know where the order has been delayed(bottlenecks) in the whole process for expedite it
I go and handover the order sheet to the person operating the machine. That is time consuming!			

Business Metrics Affected (For IGP e-commerce)

- Delivery time
- Quality of Product
- Increases Marketing campaign cost
- Reduces website traffic
- Customer loyalty and Retention
- Inventory size estimation
- Supply demand estimation

Product Metrics affected

1. Retention rate
2. Engaged sessions
3. NPS score
4. App store/Play store ratings
5. Google reviews
6. MAU, DAU

Possible Solutions

Solution	Description	Benefit
A sticky notes-based approach	Assign a sticky note with order sheet printed once and share it with designer and consequent team ahead. It will have details of its priority, order sheet number, delivery date etc.	• Not expensive • Little improvement in efficiency • Easy to use by non-computer user • No tech involved
Vendors who already have a solution in place	Looking for a SAAS based vendor who already have a product for serving this warehouse communication gap	• Easy implementation • Infrastructure handled by 3P. • Minimum operational cost • Scalable
A multi-layer ticketing, approval and tracking portal for order and its status	A web-based application with login for different users (designer, operator, quality checker, warehouse manager) For different warehouses and there will be hierarchy of users, admin, Super Admin	• Improve communication between warehouse working team • Improves communication between different facilities • Real time status to all for their warehouse orders • Priority of orders can be managed

Solutions Prioritization 

Solution	Prioritization	Reason
A sticky notes-based approach	P3	• Doesn't solve every pain points • Not scalable and robust • Non tech way (old way) • Additional handling or sticky notes with order id for warehouse members • Doesn't connect all facilities across • Almost no investment
Vendors who already have a SAAS based solution in place	P2	• Limits of third party and their functioning • Difficulty in quick resolution to tech issues • Updates, API failures of vendors • Tech Privacy concern • Less/no customization option. • Scalable but not robust. • Less investment • Can be integrate quickly
A multi-layer ticketing, approval and tracking portal for order and its status	P1	• Internally developed so expensive • Can take time and resources • Need to make budget and hire good resources. • Training to warehouse manpower • Can iterate and make changes as per pain points of users • Can keep tech and business data internally • Easy to change, revert and less or no external dependencies • Able to solve all problems by knowing problems better • Tracking, approving and speeding the design to delivery process across warehouses. • Scalable, Robust

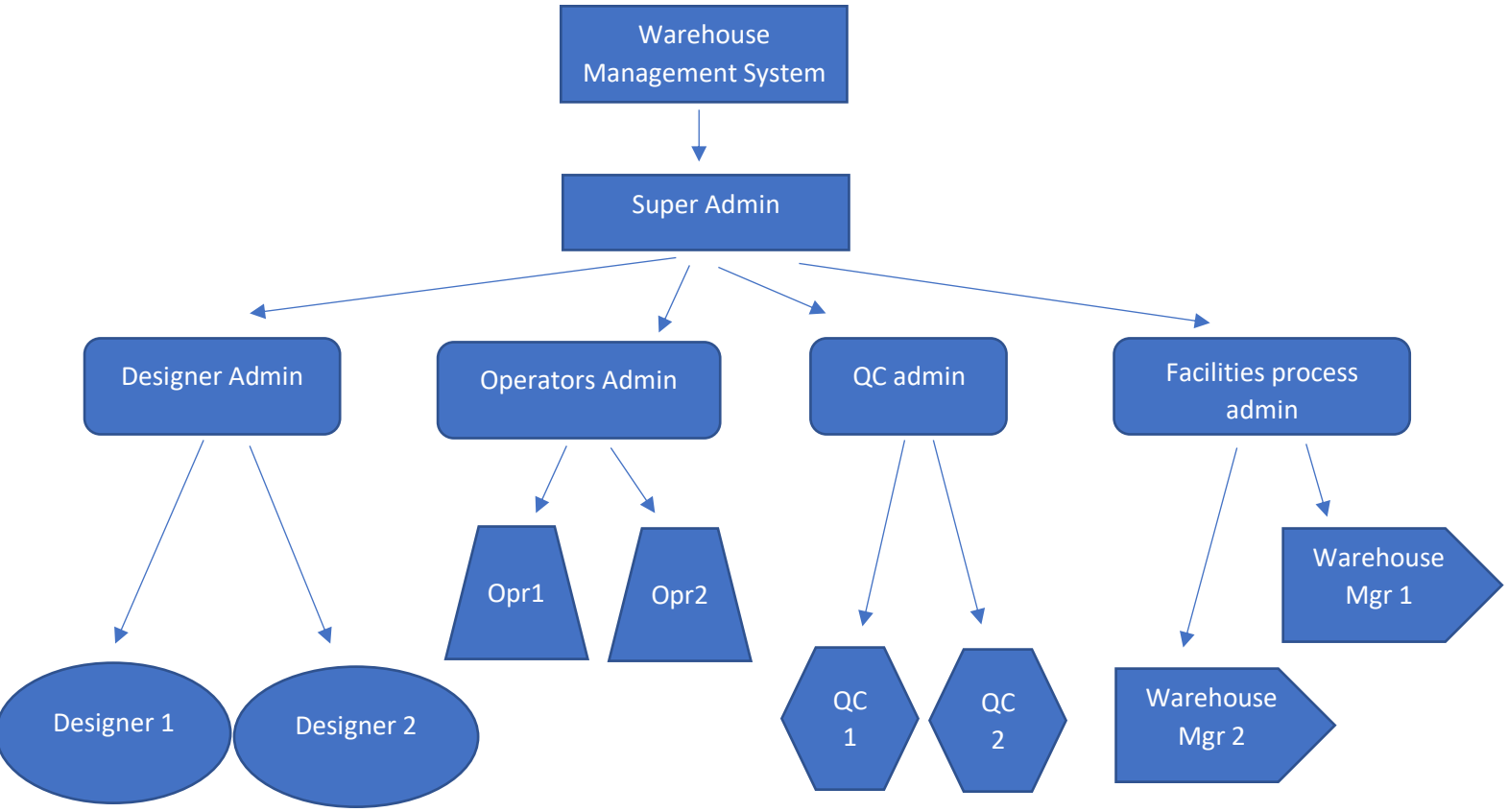
Note: Here we will go ahead with **P1 solution** considering the most benefit and less barrier

Product Design

Solution Objective:

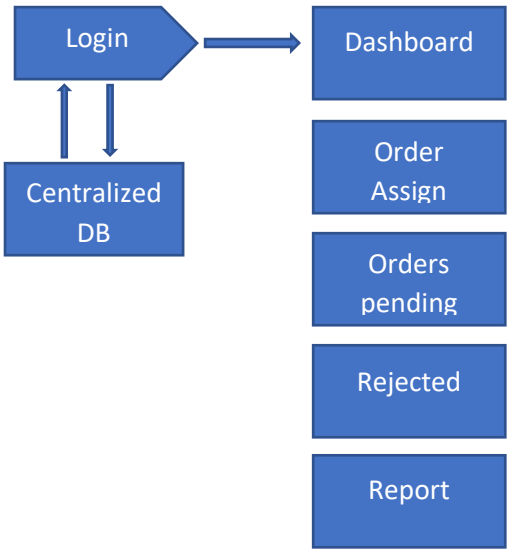
Developing a web-based portal where designers, Operator, Quality checker, Warehouse Manager across different facilities where users can single sign in and access their account. Every Individual profession will have centralized manager (ex: Designing manager, Operator manager, Quality check manager, Facilities Manager) as admin and a super admin to manage them all.

Diagram Flow

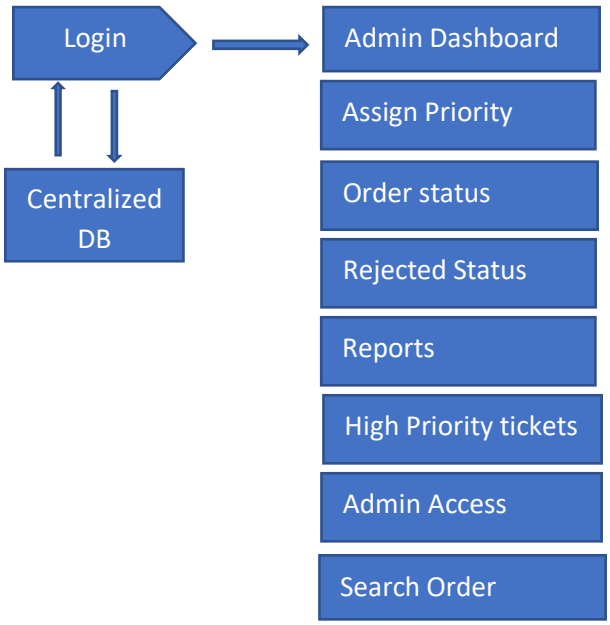


Super Admin	Admin	Users
Provide Admin access	Add users under their domain	Can get order sheet on their system
Can add new workflow	Can assign and manage priorities of order	Can understand all details of orders like priority and current status.
Can manage end to end order creation to approval	Can expediate the process	Users can track order sheets, new and approved as well as delivered
Can interfere any process stuck	Can analyse user's performance metric	Users can know in real time, when their machine is under maintenance in a day
Can generate various report to analyse different metrics	Can discuss problems on high level with other department heads	Rejections of design, quality, packaging can be tracked real time
Add new facilities and related manpower across geographies	Can deactivate users, block, approve and generate its department overall report	Users can understand efficiency through dashboard mentioning daily work details and real time work update

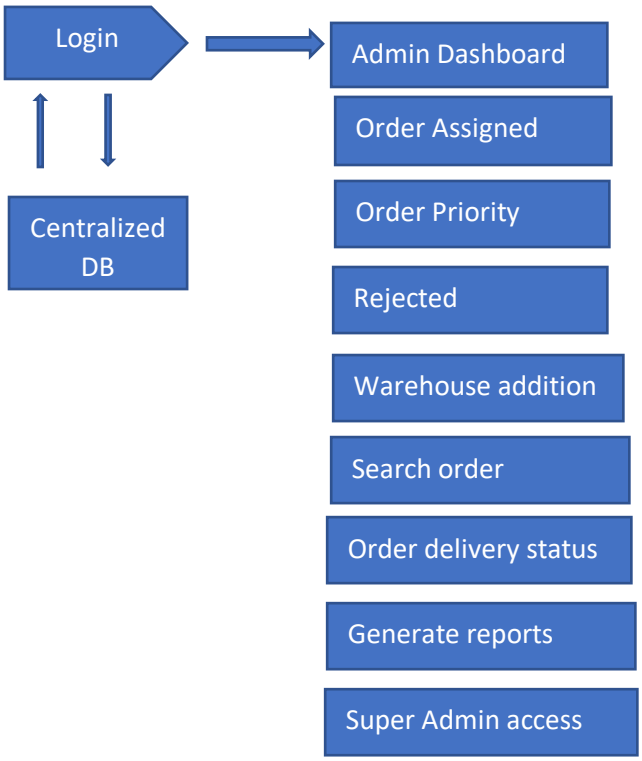
User – flowchart



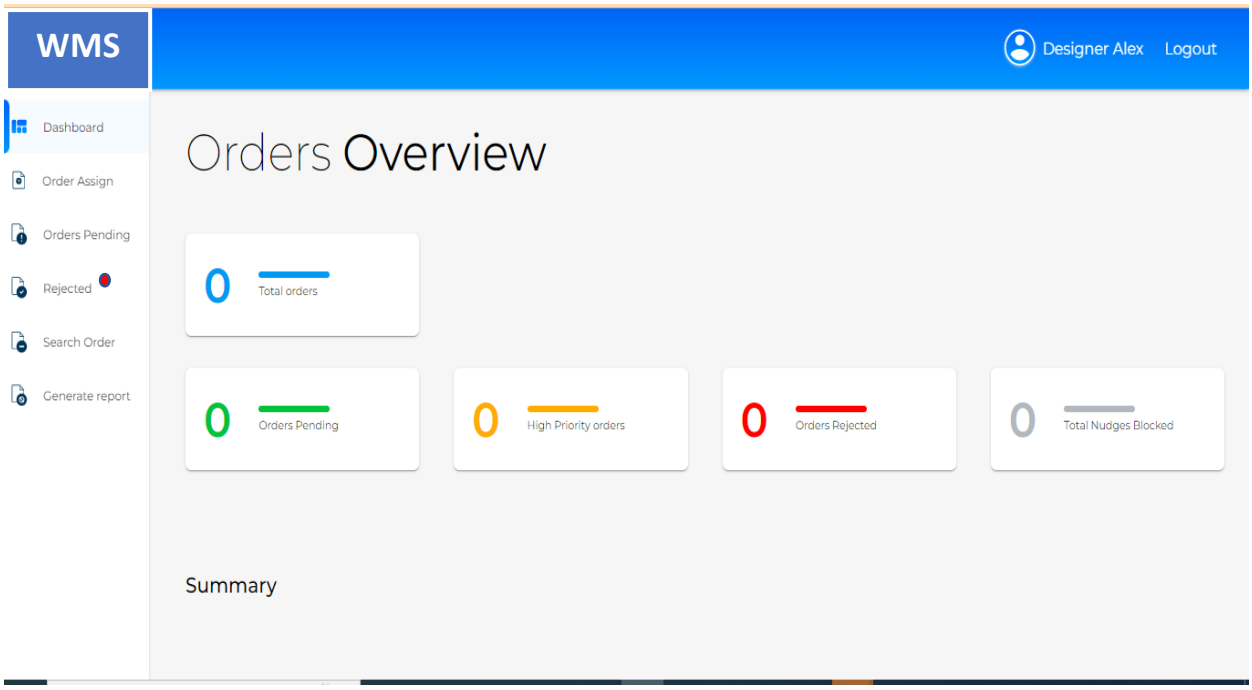
Admin - flowchart



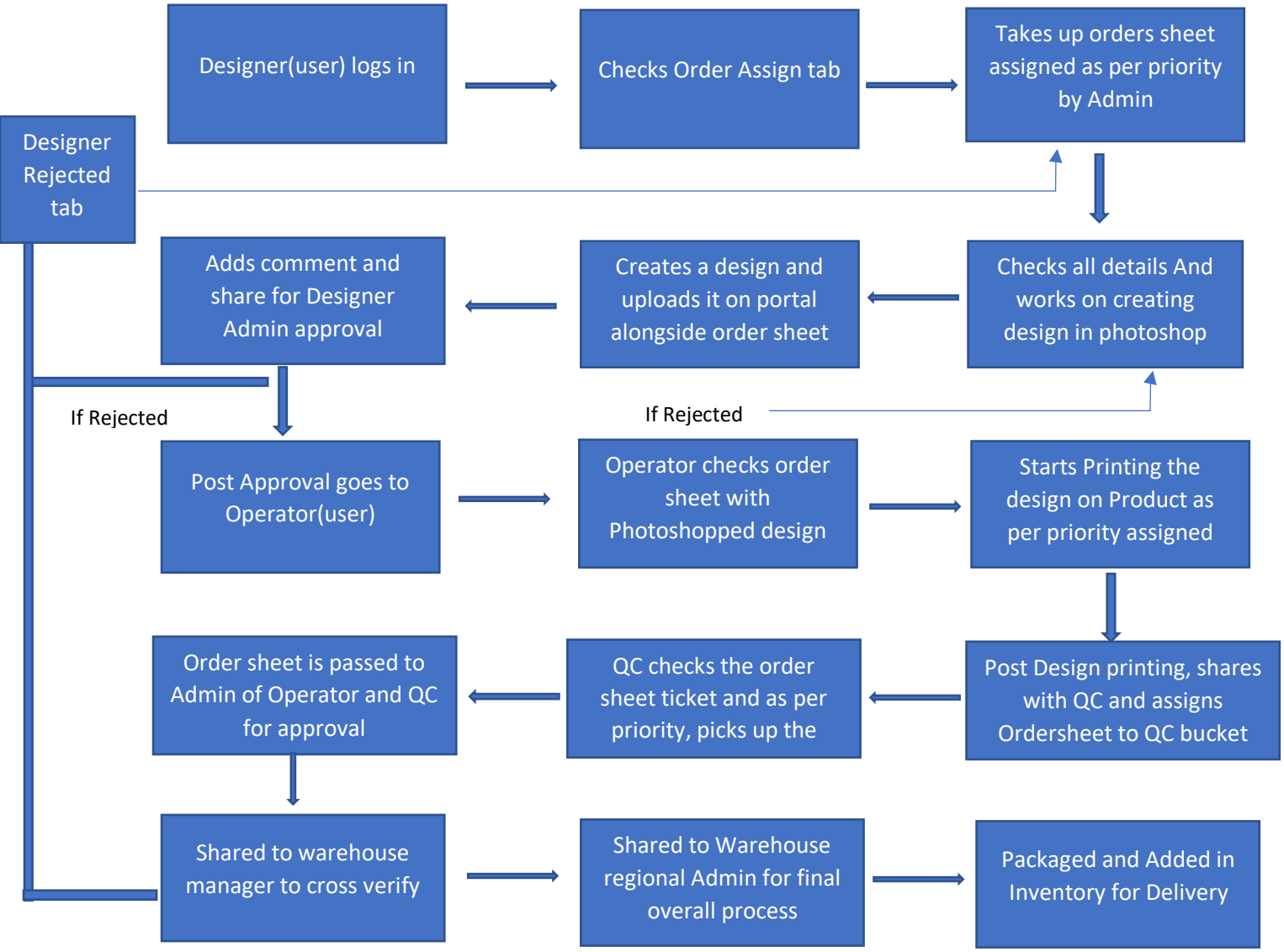
Super Admin - flowchart



UI Sample – For Designer (User)



Process workflow - End to End flow Chart



To Test – Impact of Solution (if this solution is better)

We can by two parameters – User Pain point resolution and Productivity improvement(metrics)

Designer	**Solved?**	**Operator**	**Solved?**
It's very difficult to keep track of order sheets as they are loose papers	Orders are on platform so no need of paper order sheet	I find it hard to figure out which orders I should do first	Orders are assigned priority with Order sheet algorithm as well as Admin from that department
I end up skipping some orders for which I am penalized.	Users can filter date time and check if any order is missed as orders inventory will be there on orders pending	It's not easy to operate the machine and keep track of order sheets lying near the machine	Orders are on platform so no need of paper order sheet. Can be filtered, sort, check pending ones and its current status
I have too much workload and I don't know which orders to process first.	Orders are assigned priority with order sheet algorithm as well as Admin from that department	Operating a machine is not easy and lots of time it breaks down	A firmware can be integrated with machine which can give real time health check to every department
I go and handover the order sheet to the person operating the machine. That is time consuming!	User can approve after performing his task and assign it to next department through platform		

Quality Checker	**Solved?**	**Warehouse Manager**	**Solved?**
Confusion on order sheet linked to product due to piling up	As this order sheet will be online with common identifying number on product.	To make sure that every order is delivered on time everyday	Efficiency will increase as communication becomes better
Difficulty to prioritise piled up products for QC	Priority can be checked through order sheet assigned	To reduce time for finding an order ready for delivery	Order sheet will have ARN number assignment along with Product
Handling too many products coming up for Quality check	Proper assignment can be done to different QC depending on the number of tickets(order sheet) they have.	I should be able to know where the order has been delayed(bottlenecks) in the whole process for expedite it	End to End status of order can be tracked real time

Metrics Improved

Product Metrics (WMS)	User Performance Metrics (WMS)
User engagement	Improved work Efficiency post WMS
Session time	Easy to use and understand
Conversion rate	Fast communication
Daily Tickets closed (Order Sheet)	Fast resolution
Zero Product Defect ratio	Less physical
Increase customer onboarding	Decrease in penalizing
High approvals	Easy Access to portal
High Retention rate	M-o-M increase in delivery