

- **START** - When a **Customer** approves our proposal, we must plan the production of a sample and send electronically that plan to the **Product Manager** along with the draft version of the Design and Development File (DDF). It takes 3 hours to complete this task but we do it only on Fridays in order to include all the new orders which arrive during the week. A hardcopy of this draft DDF is also sent in the next couple of days.
- If we receive an updated DDF (sometimes this happens due to changes in the materials) we need to approve and send it back to the **Product Manager** and also ask the **Warehouse Manager** to buy the missing materials. It takes about 2 hours to do it, but because we have many other things to do, we often start this task only the next day.
- When we receive the sample of a new product from the **Product Manager** we must approve and send it to the customer for approval. Normally, we do it the next day, and it takes about 1 hour, unless we receive it before 10:00am.



Product Manager

- When I receive the specifications (draft DDF) of the new product I complete the DDF while checking in our ERP system if all the materials in the bill-of-materials (BOM) are available. Typically, I do this task the next day and I need about 4 hours to complete it. I also receive a hardcopy of the draft DDF but I don't use it.
- However, to avoid problems, I ask the **Warehouse Manager** to verify if the materials really are in the warehouse but, typically, I have to wait 2 days for the answer.
- If all the materials are available I send the DDF to the **Technical Office** so they can start modelling of the sample.
- If the **Warehouse Manager** tells me that some materials are missing, I ask him to consult the suppliers. Then, I must approve the proposed materials because sometimes they are not exactly what I need, and, in that case, I might need to update the BOM in the DDF (eventually some interactions occur). I need about 4 hours to update the DDF (both digital and hardcopy versions) and I send them in the next day for **DOP** approval.
- When the DOP approves the updated DDF I send it to the Technical Office so they can start the modelling.
- When I receive the sample from the **Technical Office** I must approve and send it to the DOP. I need 1 hour to inspect the sample but typically I can only do it the next day.

Card 1/1



Latin group



Warehouse Manager

- The **Product Manager** often asks me to confirm the presence of the specific materials in the warehouse. First, I check in the ERP system and then I check in the warehouse. Most of the times I need 2 hours to answer him/her.
- When the **Product Manager** asks me to consult the suppliers about prices and lead times for missing materials, these interactions with the suppliers can last up to 1 week taking about 5 hours of my time.
- When the **DOP** asks me to buy materials, I spend 3 hours to do it but it takes one week to have those materials in the warehouse.
- When asked by the **Technical Office** I must collect and send them the materials they need. I need 1 hour to pick up the materials and I send them on the same day.

Card 1/1



Latin@ group



- We model the sample, based on the DDF sent by the **Product Manager**. Our lead time is about 2 days, although the added-value time is only 4 hours.
- To be able to produce a sample, we ask the **Warehouse Manager** to bring us all materials and components. We usually must wait until the next day to receive all the materials.
- When we have received the materials and components, we cut the materials. Due to the workload of a cutting machine, we normally need 3 days to have the required parts, although the cutting operations consume only 3 hours.
- Even if all the materials are available, the sample production can only start 3 days later due to resources availability. The production of the sample usually takes 1 day.
- When the sample is ready we send it to the **Product Manager**.

