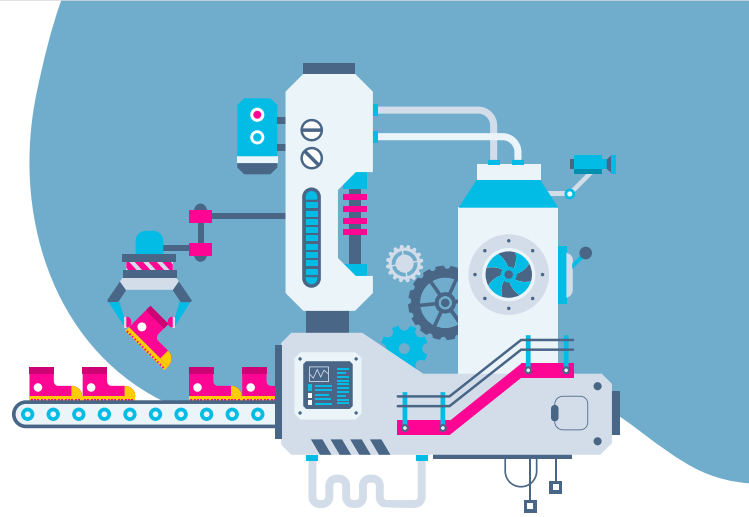
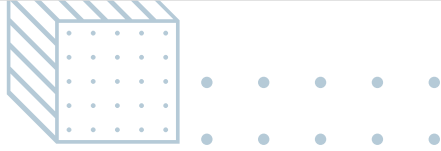




USING BILL OF LABOR (BOL) IN RETAIL (RFA) PRODUCT DEVELOPMENT





Survival in the rapidly changing global Retail environment has always hinged around being able to bring in **Design Innovation** and staying **Competitive** in terms of **Cost** and **Consistency** in **Quality**. In recent years, the need for increased **Transparency**, has been added to the aforementioned. Increasingly, customers want brands/retailers to disclose more information about their policies, practices, and processes. In such a scenario, retailers face an enormous challenge in staying cost competitive, delivering optimum quality and achieving the right balance in terms of the source and processes, especially since all of the aforementioned are interconnected and have to be achieved in tandem. For the purpose of this article, we are taking up Labor Processes (which account for anywhere between 14 – 20% of the total costs^{1,2,3}) and presenting our point of view on how effectively it can be managed to meet the objectives discussed above.

In spite of its obvious importance in the overall scheme of things, the focus on managing Labor Processes (and related cost) has not been as high as it is on other elements (e.g., materials). The reason for this is the challenge around identification and standardization of the different elements of labor within the development process. The highly distributed sourcing locations and the difference in the individual practices/procedures across geos adds to the problem. However, with the increasing focus on the need for **Standardization, Cost Rationalization and Compliance/Disclosure**, it is important that brands/retailers direct their focus to Labor Processes. In doing so, incorporating change at the development stage will be the way to go.

A key pre-requisite to achieve the desired objectives is to identify the individual process steps. Since the key objectives are to achieve standardization, cost rationalization and consistency in quality, the process steps need to have a clear definition of the activities/pre-requisites related thereto along with information around time taken and complexity. Overall, some of the key attributes that needs to be included are - **Manufacturing Area, Process Name, Standard Minutes, Formula, Process Details, Complexity**. Figure:1 below is an example for footwear.

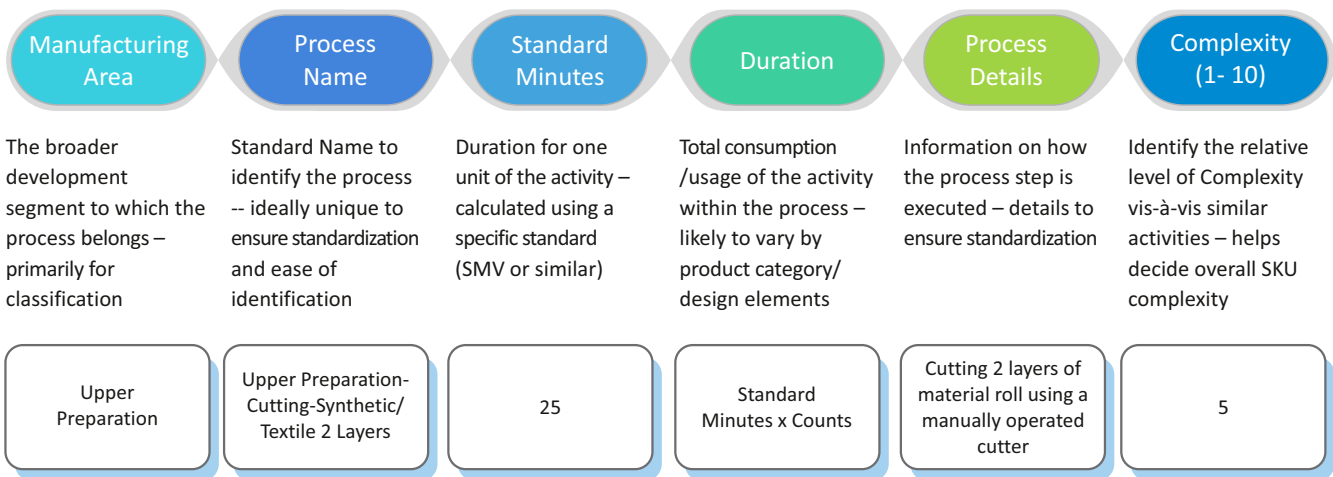


Figure:1

Similar details can be created for processes applicable to any category such as furniture or apparel.





Since any SKU is a combination of process steps (executed in a sequence), the complete set of processes required to create the SKU can be put together into a master template to reflect the Standard Process for the SKU. An example from the footwear segment is provided in Figure:2 below.

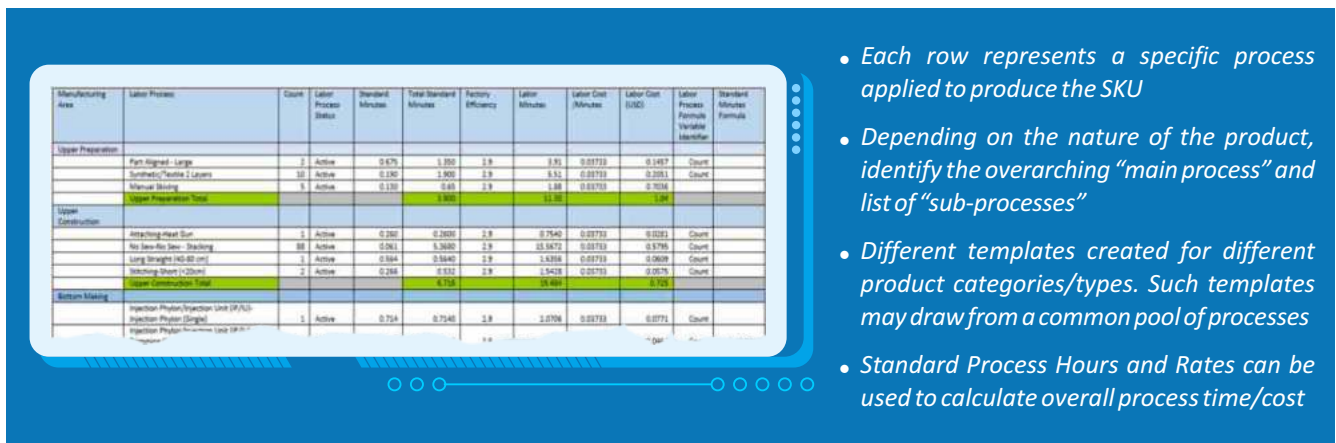


Figure:2

The above helps to meet the objective of standardizing the elements of manufacturing across different sourcing location (subject to same/similar materials and other elements):

- Process:** Set of pre-defined processes ensures that the SKUs, irrespective of their location of manufacture, go through the same set of process steps in the same pre-defined sequence
- Cost:** Since the processes are clearly described with standard labor hour calculations, it is easy to work out costs and make objective comparisons across different sources/factories which goes a long way in making objective sourcing decisions (extremely valuable for Cut Make Thread model and can also be used for FOB models)
- Quality:** Any SKU coming out of a standard set of processes is likely to have similar quality characteristics. This is a huge win in terms of ensuring uniform "Customer Experience" and also "Performance Claims" made against such SKUs

Now that we have been able to establish the efficacy of the approach, the question is how do we ensure that brands/retailers are able to manage and use the information as part of regular product development?

Since retailers are increasingly digitizing their product development through PLM systems, they can define the standard process components and then build style/category specific templates to capture the recommended process steps applicable to the products they develop. The native PLM functionality around Library and Bill-of-Labor (BOL) can be leveraged to build the Process Standardization templates. Below are some details:

- Library:** Can be used to create a repository of processes that are used across the different products developed. The individual records can be stored with a standard set of details (attributes) representing relevant data points for the processes. To facilitate ease of identification and re-usability, the records are expected to capture the info at a similar level of detail including (but not limited to) Unique IDs, Standard Name, Standard Process Description, Labor Rate/our, Standard Minutes, Level of Complexity, Labor Process Status. This will meet the dual objective of standardizing the level of detail for each process and also facilitating re-use across developments
- Bill of Labor (BOL):** Can be used to create standard templates related to the different product categories/types, etc. to reflect the different set of processes that apply

As the development activities are initiated in the PLM system, the elements of design can be used to identify the appropriate BOL template that goes with it. This will facilitate the communication of process information, as part of the Tech pack to drive sampling and costing (Refer Figure:3 below).

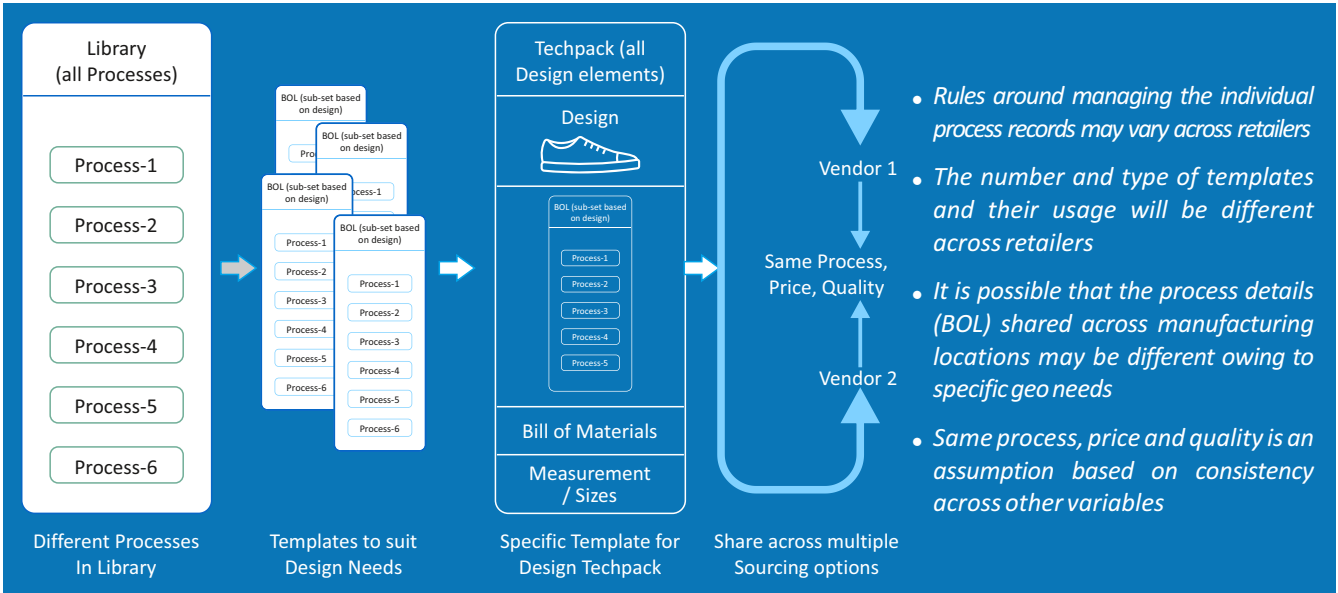


Figure:3

Having the approach described above can have significant advantages such as:

- **Eliminate Redundant (Waste) Processes:** Use of standard templates will help incorporate principals of “Lean Manufacturing” through “Process Value Mapping”. Retailers can review existing processes and identify “non-value add” steps and create/modify templates accordingly, thereby reducing time and cost in development/production
- **Early Resolution of Potential Production Issues:** The native PLM functionalities can be leveraged to add the template (BOL) across different styles being developed. This will help drive “Standard Process Driven Development” and ensure that the desired process steps are followed from the initial development stage. Such a practice will help identify any process issue and ensure early resolution, thereby saving significant time later (in actual production)
- **Negate Locational Variances:** Use of standard templates will ensure that all the locations (geos) developing the same SKU follow the same set of processes and in the same pre-set sequence, reducing/eliminating significant locational variances
- **Cost Standardization:** With similar sets of processes, the labor cost across locations is likely to be equated (subject to local wage variances) which will help achieve better cost comparisons and help make more objective sourcing choices
- **Transparency:** Standard process steps will make it easier to address the transparency needs as regards their manufacturing practices

Further, the process records used as above can leverage the robust PLM reporting capabilities to identify the most widely used (valuable/costly) processes. Such information can be used by the brands/retailers to optimize/refine the processes to drive significant cost savings/efficiency improvements/alignment to universal practices.

The usage can be further extended to provide benefits through application of advanced technologies like Artificial Intelligence (AI). One important use of standard process templates can be in “**Design Impact Analysis**”, which can use the following:

- Target/desired “Complexity” for the style
- BOL associated as part of "Design" early in the Product Development cycle
- Power of AI to drive “Process Step Simplification” by suggesting “alternatives” to the BOL processes





Pre-set parameters (Product Category, Intended Usage, Quality Expectations, Price Points, Intended Market) can help define the level of Complexity that is desired for the style. The AI engine can compare the BOL associated with the style (as envisaged by the design team) with recommended “Complexity” and suggest the optimum set of process steps (Refer Figure:4 below).

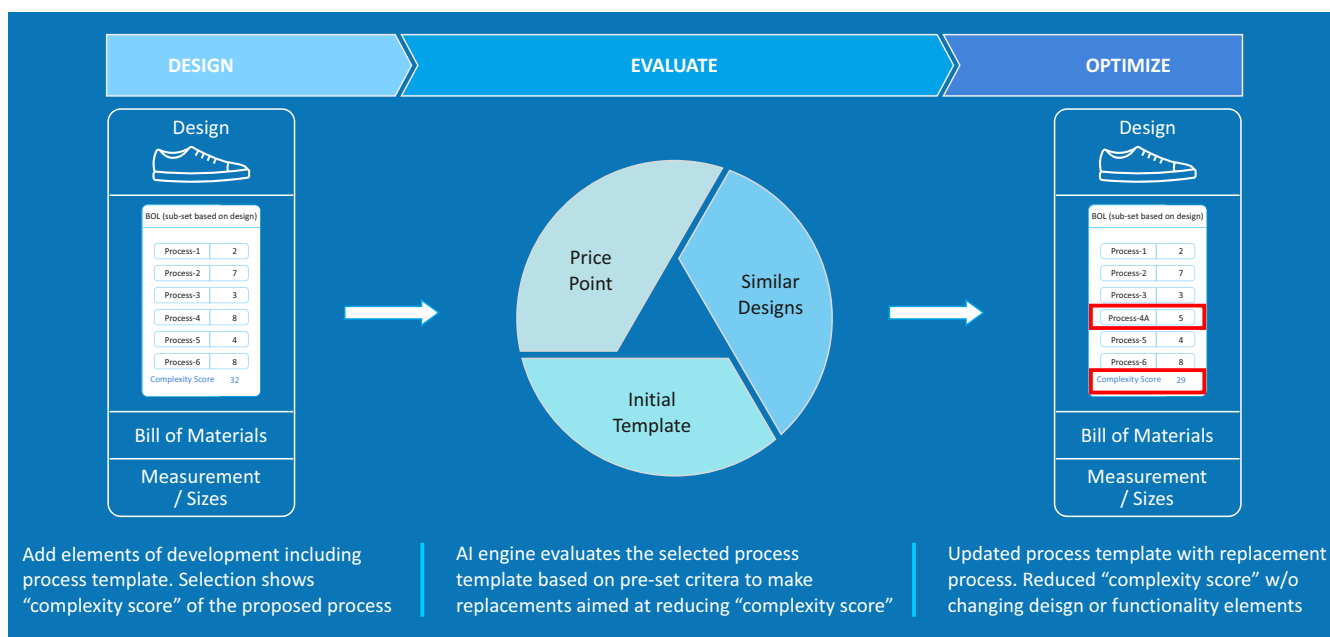


Figure:4

The above approach can add significant value to the product development process in terms of:

- **Optimizing** design elements to ensure “just enough” to meet customer and market needs
- **Reducing** product complexity and speeding up development/production
- **Margin Improvement** through cost reduction

While the use of process templates has significant benefits, their creation and maintenance is likely to throw up following challenges:

- **Large Number of Categories:** Brands/retailers deal with a wide range of products in terms of categories, markets served, etc. These have significant process variations. As a result, the number of processes and templates are expected to be quite high with multiple rules of usage
- **Achieving Accuracy in Terms of Process Parameters:** It is significantly time consuming to create the initial standard processes and their parameters
- **Achieving Standard Application of Processes:** Owing to the large number of manufacturing locations, enabling the standard processes across all locations and ensuing compliance can be challenging

ITC Infotech’s BOL solution incorporates most of the points discussed above and can help brands/retailers reap the benefits of development process standardization and overall design optimization. Our Retail PLM team can assist retailers in developing standard process libraries and category templates through process analysis and alignment with best practices. In addition, our team of experts can help design the process parameters that need to be captured as part of the standardization initiatives to help drive business efficiencies and meet customer expectations around transparency thereby enhancing business value.



REFERENCE LINKS

1. <https://medium.com/@stitchdiary/how-is-costing-done-in-the-garment-industry-9046a0872c50>
2. <https://graincreative.com/shirt-cost-breakdown/>
3. <https://www.choice.com.au/health-and-body/diet-and-fitness/sportswear-and-shoes/articles/shoe-factory-working-conditions>
4. https://issuu.com/fashionrevolution/docs/fr_fashiontransparencyindex2020
5. <https://www.nomiddleman.com/everlane-the-rise-of-radical-transparency/>
6. <https://www.mckinsey.com/~media/mckinsey/industries/retail/our%20insights/fashions%20new%20must%20have%20sustainable%20sourcing%20at%20scale/fashions-new-must-have-sustainable-sourcing-at-scale-vf.ashx>

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