PRODUCT DEVELOPMENT TRACKER: HISTORICAL VS PREDICTIVE

INTRODUCTION

"Lengthy Product Development Times" features amongst the top 6 issues facing Retailers globally. To mitigate the challenge, Retailers are investing heavily on PLM tools with the aim to increase collaboration through real time visibility to development details that help them take corrective action at the earliest.

One of the key functionalities that help the Retailers achieve timely identification and enable addressing of product development issues is the functionality around Calendar Management. Of the key areas that Retailers are looking at within PLM to help achieve their goals, "Calendar and Workflow Management" features within the top 8. A recent study shows that 85% of the PLM respondents either implemented a Calendar or are likely to do so in the next 12 months. Within the PLM functionality wish list for 2017, Calendar and Critical Path ranked amongst the top 3. Overall, it is a key functionality that PLM users are looking at to help realize their PLM objective of reducing development time.

From a business perspective, the Calendar is a set of planned development milestones against which the PLM users compare their actuals to identify delays and formulate action plan to mitigate. While the Calendars vary in content and complexity, depending on the type of product, role and the level of detail expected, it is inevitably maintained irrespective of the level of technology that is enabled in the overall development process within the company. Some of the key aspects of the Calendar are:

- It carries the key product development milestones that need to be tracked
- It is based on multiple product development variables that impact the milestones

Owing to the importance of the Calendar within the development process, almost all PLM solutions have a functionality around specifying and tracking pre-defined milestones and a way to enable users to review the status of the milestones based on current state of the development.

Irrespective of the form and mechanism of how the Calendar operates, one of the standard aspects of any PLM Calendar is that it shows "Current State". What it does is to essentially show the status of the milestones based on activities carried out in the context of the development, and report on the difference (on-time, late etc.) between planned vs actual. Overall, it is more "Historical" than "Predictive". While this is useful to some extend to flag issues and initiate corrective action, in true sense, it is "curative" than "preventive". More often than not, by the time the issue is flagged, the cure is costly and time taking, and beyond a point, impacts the Retailers ability to effectively react to an eventuality, which otherwise is inherent in the process owing to the variables involved. Overall these Calendars have limited use and scalability to help reduce development time and increase time to market. A better solve will be to have a Calendar that helps identify issues way before they are due to happen, based on patterns within similar process variables appearing across other developments. In short a "Predictive" Calendar.

With the increasing acceptance of the power of Artificial Intelligence to solve business problems and the traditional PLM tools now scalable to embrace the technology, PLM tool owners should start looking at developing a Calendar, which will flag issues based on the associated Product elements and the available historical records corresponding to them. It should do so based on past/present state of similar developments and patterns that have emerged over time. It should be able to leverage the following:

- Historical data elements that exist in the PLM tool (e.g.: Similar Products, Same Supplier etc.)
- Records of past performance within the specific data elements (e.g.: Cost Approval, Sample Approvals etc.)
- Power of AI to effectively analyze trends to make logical forecasts

An example of the above will be to flag a new development as potentially late, if multiple other developments with the same Supplier are delayed. Based on the predicted info, developers can take appropriate corrective action. In this case:

- Replace the Supplier with another one at the very onset **OR**
- Closely monitor the Supplier dependent activities for the Product

The above will be a clear advantage since the developers will be forewarned of potential issues and be able to put a clear action plan in place to account for the danger. This is in clear contrast to existing functionalities, where the developers are usually blind sighted when the development starts. When things begin to get out of hand, bringing them back on track becomes cumbersome, costly and in many cases futile which impacts overall deliveries and the core goal of reducing time to market.

While it may appear that with the latest technology in AI, a predictive calendar is easy, in reality, it may not be so, given the complex nature of the elements that go into a typical Retail development and the interrelation/dependencies within them.E.g.: Same Supplier may be very effective for one Category of Products as compared to another, or, the delays in developments may be owing to reasons beyond his control (say Supplier may not be responsible for delays in the Lab-dip Approvals owing to delays at the Approver's end). Below are the key challenges:

- Identifying the key development elements that need to be considered
- Establishing the level of granularity
- Identifying the dependencies between the development elements and milestones

Therefore, it is important to undertake a close analysis and careful selection of product data elements, their corresponding review criteria and weightage to drive the predictions. As a starter, it may be useful to identify the following:

- **Criteria that are inherent in the product:**
  - Target Completion Date (based on set-up date)
  - Level of Complexity (identified by developers while setting up the product)
- **Criteria that are not inherent in the Product:**
  - Supplier (past performance, core competency etc.)
  - Status of Similar Products (using same material etc.)

TARGET DEVELOPMENT TIME (SET DATE)

It is important since products closer to the target date tend to have a higher risk factor irrespective of the source or level of complexity involved. As a result these need to be flagged appropriately.

LEVEL OF COMPLEXITY

The nature of development (new or repeat) and level of detail (# of materials etc.) are the key elements that increase complexity. Some of the important aspects that need to be considered are:

- Presence or absence of BOM
- Level of BOM details
- Designed or Vendor Sourced

SUPPLIER

They are the key drivers in the development and play an important role in timely completion of key milestones within the development process. Some of the important aspects that need to be considered are:

- Core Competency of the Supplier
- Key milestones that the Supplier impacts (submission of Costing, submission of Samples etc.)

E.g.: A Supplier assigned to a Product that is not his core competency is a risk

STATUS OF SIMILAR PRODUTS

How similar products are doing is important since they may be using similar BOM (material), undergoing similar development activities (lab-dips, fitting etc.)

E.g.: One or more materials used have pending lab-dips across other Products is a risk

CONCLUSION

While the existing Calendar functionality helps address some issues, with predictive analytics at our disposal, we should start looking at making the Calendar more robust so as to provide increased value-add to Retailers. While identifying the key elements and establishing a clear correlation between the parameters appears challenging, however, the potential benefits are likely to out weight the effort. The ability to predict delays will go a long way in achieving the goals of lowering lead times and faster time to market and make the Calendar functionality within PLM tool meaningful.

References

- Supply Chain Survey 2018, IDC
- Creating and RFP for your Fashion, Apparel and Footwear PLM Project, CGS
- Apparel Mag

Others

AUTHOR'S PROFILE

PINAKI BANERJEE

(Program Director at ITC Infotech)

Pinaki Banerjee is responsible for leading the Retail PLM digital transformation initiatives across clients in ITC Infotech. He has over 17+ years of experience across multiple Retail Business and IT roles.

As part of the ITC Infotech's Retail PLM team, he has been associated with 15+ PLM implementations and business transformation engagements. He has helped to develop new client base and extend existing engagements through business process optimization and solutions that help create long term business value.

In his present role, he works closely with clients to help develop approach that maximize their PLM experience through a mix of business process and system capabilities. In addition, he also leads the in-house solution development initiatives within ITC Infotech.

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www.itcinfotech.com | contact.us@itcinfotech.com