

At the Other End of Innovation

Product Portfolio Complexity Reduction



The focus on innovation, and the ever-faster introduction of products, is building larger and more complex product portfolios. At the “Other end of innovation” we find that many companies are not managing to phase-out old, low volume or low margin products at the same pace that new products are added. Furthermore, market adaptations, customizations, and product line extensions keep adding variants to both new and old products, all with good intentions to generate revenue growth. However, there is a risk that these will drive internal inefficiencies and potential margin erosion. Arthur D. Little’s experience is that companies should devote more attention to, and develop efficient and effective approaches for product phase-out. In this viewpoint we share some fundamental concepts that have produced tangible results for our clients.

Larger and more complex product portfolios risk driving inefficiencies and margin erosion

Innovation and the drive to customize products and target more segments are generating products with higher value for the customer and growth opportunities for OEMs. On the flipside of this development is a wider product portfolio that risks driving internal complexity costs, lower economies of scale, and more capital tied up in inventories. Although we believe that the positive aspects of product proliferation outweigh the negative, there is most often an opportunity to improve the overall performance by continuous phase-out of low volume, low margin, or overlapping products. The concept, commonly called “product range pruning” or “tail cutting,” can be seen as a specific part of the wider notion of product portfolio management. The concept is relevant in all industries although this Viewpoint uses examples from the manufacturing industry. There are more options to complexity management, such as modularization, but this viewpoint focuses on portfolio pruning of end-products.

There is value to be gained from portfolio pruning and strong phase-out processes

Fundamentally we believe that the product portfolio of a company must be managed. This means both managing portfolio additions and portfolio subtractions. In particular, OEMs

in the manufacturing industry should devote more attention to portfolio pruning and product phase-out, although it can be quite a challenge to chisel out a general business case for such activities. The challenge is to identify and monetize the company specific benefits related to revenue, cost, and capital.

Revenue benefits are indirect and vary from case to case. One typical benefit relates to unit sales, potentially based on faster product introductions, as time for innovation and creativity is freed-up and can be devoted to new development. Another benefit relates to pricing potential as more time can be devoted to optimize the price of the remaining products.

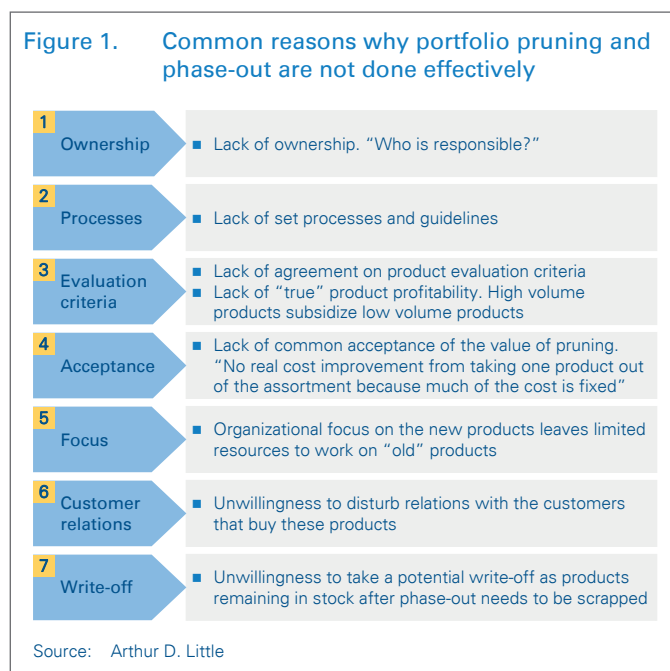
Cost benefits are both direct and indirect. The most important, yet most difficult parameter relates to reduced internal complexity cost, e.g. sales efficiency from simplified product assortment, reduced administrative time for product maintenance (R&D, controlling, production), and increased production efficiency (larger batches, less change over, better yield, etc.). A more direct benefit that is quite easy to quantify relates to inventory e.g. reduced inventory holding cost, reduced cost of obsolescence and scrap. Sometimes there is also potential for sourcing cost reduction based on volume concentration as a result of a narrower product assortment.

Working capital benefits are direct as the reduction of product variants will have a positive direct effect on capital tied up in inventories.

Monetizing the benefits is also important when it comes to execution and to facilitate the decision to phase-out. We will come back to this aspect later in the viewpoint.

Underdeveloped processes and lack of execution

In our client engagements, we often find that the processes to discontinue or phase-out low volume, low margin, or overlapping products are underdeveloped. In some cases, guidelines and processes might be in place, but the actual results are weak. Lack of results can typically be traced back to issues in execution and follow-up. It may seem quite basic; just phase-out some products and the problem is solved! However, in practice these things are not as easy as it seems. In our work we find many underlying reasons why this is not addressed properly. (Figure 1).



Last but not least; it seems to be human nature to find it easier to add than to let go.

Approach for rapid progress

Although we advocate a continuous process, there is often good potential to show short term results from a focused initial effort. One does not exclude the other, and the short term push is often the best way to implement a new continuous working practice, i.e. we start with quick wins and then gradually move into a continuous process of portfolio optimization. The whole approach can be divided into the following five steps:

1. **Define the purpose.** Start by ensuring a cross functional alignment on the need to act involving key stakeholders from Marketing & Sales, Product Management, Engineering, Operations, and Purchasing. Define the purpose and agree on a common objective. For the pruning part we would suggest to set an ambition driven reduction target.
2. **Make a high level map of the current situation.** What is the status of the current portfolio? Has there been continuous activity or just a few phase-outs for some years? Use the assessment to identify areas with the highest potential. Select these areas as the focus for the next step.
3. **Analyze the portfolio.** This step is about reviewing the portfolio and identifying candidates for phase-out. The analysis can be facilitated using levers as illustrated in Figure 2. We typically find it easier to add than to let go, and this is why we suggest reversing the inclusion logic. Ask why a product should be kept rather than why it should be discontinued. Define a set of criteria by which each product can be evaluated. For example, we include criteria such as financial rationale, portfolio rationale and strategic rationale. The financial rationale relates to the actual financial contribution of the product. In this analysis, it is important to carefully consider the negative side of the product business case and not only look at revenue and direct costs, but also the indirect costs of keeping a product. This is often not properly reflected in standard product costing models. Portfolio rationale is about the role of an individual product within its product group e.g. the need to have a complete range of sizes within a product group. The strategic rationale takes a higher perspective. The key question is if the individual product enables sales of other products and can therefore be motivated. Facilitate decision making by summarizing the analysis in a visual overview of the product portfolio, showing the "tail" and the variants that perform below acceptable levels.
4. **Anchor with marketing and sales.** Up until this point, the work is typically done in a smaller central team driven by product management and the sales department. Before initiation of phase-out projects it is advisable to fully anchor the phase-out candidates with the broader marketing and sales community, especially field sales in the largest markets or segments.
5. **Initiate phase-out projects.** Plan the phase-out over a period of time to minimize inventories and to allow time for the sales organization to introduce customers to replacement products.

Figure 2. Levers to facilitate the decision to phase-out



1. Reverse the inclusion logic
 - Ask why a product should be kept rather than why it should be discontinued
2. Define the negative side of the product business case
 - Yearly cost of (keeping) a product
 - Working capital per product
3. Set evaluation criteria
 - Define the logic for keeping a product in the portfolio along three dimensions:
 - Financial contribution
 - Portfolio rationale
 - Strategic rationale
4. Create a visual overview of the tail
 - E.g. products vs. financial contribution
 - E.g. financial contribution vs. strategic rationale

Source: Arthur D. Little

Heavy manufacturing (case study)

A global leader in the heavy manufacturing industry had succeeded in driving double-digit growth over many years. However, the growth had come at the expense of down-prioritizing internal control mechanisms, processes and strategic portfolio management. As industry growth came to a halt and incoming orders declined, it became apparent that the product portfolio complexity had become a serious problem and now the company needed to take decisive action.

Top management decisiveness paved the way

The executive team committed to an ambitious target to quickly reduce the portfolio by 20% in a “cut the tail” initiative. With no previous experience of challenging the rationale of the growing portfolio and low volume variants, the first port of call was to agree on a set of common evaluation criteria to start identifying low hanging fruits of phase-out candidates based on the products’ financial performance, strategic importance and role in the portfolio.

Visualized quantitative and qualitative analysis

The financial performance could easily be compiled with existing quantitative data to unveil the share of “low performers” and visualize the tail of low volume, infrequently sold products. (Figure 3).

Secondly, strategic importance and portfolio roles were assessed by answering a set of key questions. Which products were enablers for incremental sales of the portfolio cash cows or targeted high priority segments? Which products were considered standard assortment and

which were “range fillers” that enabled a competitive width of the offering? Last but not least, what was the share of technically unique vs. redundant products? The visualization of the portfolio from different operative, financial and strategic dimensions drove discussions which had never before taken place.

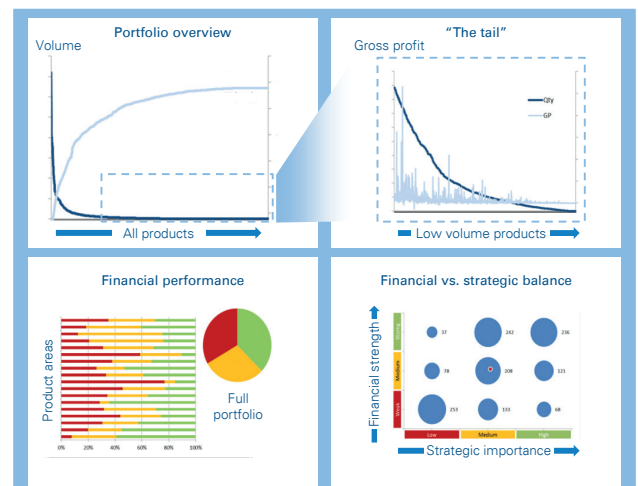
Allow time for change and highlight the positive impact

Going into the process, the team doubted that the outcome would be surgical enough to avoid cutting away valuable products, missing out on dependencies that would have ripple effects in other parts of the portfolio or simply just taking out a few obvious items but not reaching the 20% target. The key success factors was to use a pilot (a tightly defined range of the portfolio) to grow confidence and turn negative attitude into enthusiasm and the reversed inclusion logic, if no one could give solid rationale to why the product was needed, it was put on the phase-out list.

Positive financial impact from the identified phase-outs

In the end, the team identified 15% direct phase-outs but also an additional 14% that should be kept, but only under the prerequisite that prices and margins were adjusted. In total, nearly 30% of the portfolio was identified for tangible actions. With clearly defined plans for transfer of volumes into higher margin products with similar features, the financial impact of the phase-outs was concluded to be negligible for both volume and revenues while gross profit % increased. The recommended list of phase-outs was also confirmed by the global sales teams and unanimously approved by the executive team.

Figure 3. Visualization of portfolio analysis



Source: Arthur D. Little

Conclusion: Execution is the main challenge

There is value to be gained from portfolio pruning and strong phase-out processes. Product portfolio complexity reductions address the root cause of many performance issues and thereby reduce cost and free-up time for innovation and creativity. Processes and ways-of-working with portfolio pruning and phase-out are often underdeveloped.

Arthur D. Little has developed a toolbox of well proven concepts and approaches designed to overcome the key challenge companies face related to execution. Success often includes a combination of focus, know-how and experience.

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Arthur D. Little

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