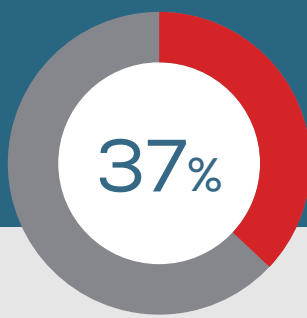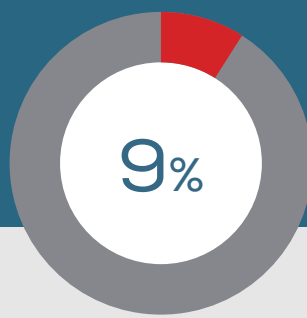# aPriori

7 Tips to Eliminate Late-Stage Redesign Work

aPriori, in conjunction with Machine Design and Industry Week, completed a survey to assess where manufacturing costs are getting out of hand and how many companies are making it a priority by investing in simulation software.

37% — 37% OF RESPONDENTS INDICATE DESIGN TO DELIVERY SCHEDULES ARE SHORTER

9% — 9% OF WHOM INDICATE DELIVERY SCHEDULES ARE SIGNIFICANTLY SHORTER

THE FOLLOWING SEVEN TIPS provide guidance around how digital manufacturing simulation software can enable manufacturers to identify and eliminate manufacturability issues and cost drivers early in the design process and reduce or even eliminate late stage thrashing to achieve target costs.

7 TIPS

1 FOCUS ON QUICK TURNAROUND FOR PRODUCT OR SUBASSEMBLY COST ESTIMATES

68% of cost estimates from suppliers take a week or more to generate. This has a **significantly negative impact** on the design-to-delivery lifecycle.

68%

2 PAY ATTENTION TO YOUR COMMUNICATIONS CHANNELS

Nearly half of all respondents shared that lack of communication between design and manufacturing is the major obstacle they face. **Digital manufacturing simulation software** that features a single database for cost and manufacturing analysis **would greatly improve this collaboration.**

3 EVALUATE MANUFACTURABILITY AND COST DRIVERS EARLY IN THE PRODUCT LIFECYCLE

EARLY PHASE DESIGN OBSTACLES

56% OCCUR AT THE MANUFACTURING STAGE

61% OCCUR AT THE PROTOTYPING STAGE

Manufacturability and cost simulation software provides visibility to these issues long before the design is released to manufacturing.

4 GET A HANDLE ON MATERIAL COSTS USING DIGITAL MANUFACTURING SIMULATION SOFTWARE

Two out of every three respondents agree that product design-to-delivery **costs have increased** over the past couple of years due to increases in material costs.

5 ELIMINATE EXPENSIVE PROTOTYPE EVALUATIONS AND MANUFACTURING REVIEWS

Product design teams don't identify potential manufacturing issues early enough. Applying **manufacturability and cost simulation software** to early phase design concepts allows the user to quickly identify potential complications, and **could eliminate the need to produce prototypes altogether.**

6 KNOW WHO IS RESPONSIBLE FOR THE MANAGEMENT OF PRODUCT COST

RESEARCH INDICATES THAT THE RESPONSIBILITY FOR PRODUCT COST MANAGEMENT IS

MANUFACTURING EVALUATION	BUSINESS STRATEGY	DESIGN ENGINEERING	OTHER
8%	29%	41%	22%

7 MAKE PRODUCT COST EVALUATION PART OF YOUR PHASE GATE PROCESS

41%

Four in ten respondents **(41%)** are not considering estimated manufacturing costs vs. target costs.

This is because the design team **does not have access to tools** that would allow them to do that.

Furthermore, at an advanced level, the project management team could stipulate that a design must be at or below target cost in order to pass through a phase gate. Companies with this type of rigorous process often see significant improvements in product profitability and accelerated time to market statistics.

Learn more about how to generate cost and manufacturability insights in minutes using aPriori.

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