Managing Engineering/R&D in a Downturn

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Engineering and R&D are often critical to the long-term value of a company, yet they consume precious cash during a downturn. How can a company preserve long term value while still managing cash?

General Points
In many companies, technology is a key driver of long-term value – both for product capability as well as value to an acquirer.

In a downturn, a company faces tough choices conserving expenses especially in engineering and R&D:
- Engineering can be the costliest expense in the company – and the hardest to replace.
- Outside consultants are also costly.
- The cash return on engineering activity has a long gestation period – new features can be 3 to 6 months away and then it takes time & marketing expenses for them to produce revenue.

It is tempting to cut engineering resources when expenses are under pressure. Cutting non-performers is obvious. And every expense must be looked at carefully in a downturn, but there are aspects of engineering/R&D that should be carefully considered.

Think Outside the Box on Engineering Expenses
1. **Most roadmap features can be delayed with little revenue impact –** Some features can be deferred but some of those features may enable near term revenue – such as a major new feature needed to close a huge deal. So, accelerate the ones that have near term revenue impact and put the rest on hold.
2. **Consulting expense can usually be reduced or eliminated –** Reduce or eliminate consulting expense that is not tied to the near-term objectives. But communicate with your consultants about how the cuts can be done in a way that doesn't needlessly damage your relationship with them. Apply the same logic to any open hiring requisitions – most will have to be put on hold.
3. **Cut Back on "Experiments & Investigations" –** Development work that looks at longer term technologies that have a payback of 1 – 3 years can be put on hold and those resources applied to the near term roadmap items that can produce revenue.

Be sure to involve your team - even individual contributors - as you seek ideas to save money.

Think Cross Functionally
Even after applying the concepts above, engineering/R&D will probably still have a higher burn rate than desired.   Can engineering resources be redeployed to either 1/increase revenue, or 2/reduce expense?

It might seem strange to consider redeploying engineering resources into other functional areas, but it often can work. What follows are real-life examples of how it has been done.

Example 1: Re-deployment to Sales
Most engineers will NOT thrive as a field salesperson making physical sales calls on new customers. But there are two other sales areas that often can work and during the 1991 downturn, these two approaches were taken:

- **Sales Engineers (SEs)** – Many companies have technical salespeople that explain to customers the technical aspects of the product or assist a customer in a pre-sales product. The SE helps with installation, configuration, and training. This role does not require a "sales personality" as often the SE is talking to technical personnel at the customer.
- **Telesales/Telemarketing/Product Support (Helpdesk)** – Many engineers will lack the people skills for this role, but some with stronger people skills thrive in a role like this.

When these were adopted in a company in 1991, both ideas worked. Revenue was produced and expense saved (we deferred hires), but the engineers also loved the opportunity to talk directly to customers! They became better engineers – and other people in those departments learned from them. After the crisis some of the engineers wanted to stay in sales or consider moves to product management!

Example 2: Re-deployment to Technical Support
During the 2008 downturn a company we worked with faced pressure to cut in engineering. We also had just launched new products that would produce revenue. However, we had to expand technical support or those sales opportunities would have failed.

So, we asked engineers who were freed up by our reduction in our product roadmap (see section above) if they would handle technical support for 3 to 6 months. Several of our engineers with stronger people skills volunteered – in fact we got more volunteers than we needed!

The result:
- Engineers loved talking to customers about problems with the product.
- Some engineers learned from customers about problems she/he never knew about – that could be fixed very easily. In one case an engineer worked all night to fix a product feature which we then released days later, and it helped close a deal!
- Customers suggested exciting product features to the engineers, some of which were easy to implement and helped sell more products.
- This cross functional "pollination" boosted morale across the company.

After the crisis was over, several of our customers remarked "your company has the strongest technical support team we have ever experienced". We never told them our secret!

Summary
- We are not suggesting that these specific ideas will work in your company (though they might)
- The key concept is the style of thinking – can 1/you thoughtfully reduce expenses, and 2/redeploy technical people in a way that positively impacts both revenue and expense?

Defense Preparedness in engineering and R&D requires thoughtful consideration of **how development activities can produce revenue** and how **cross-functional thinking can impact revenue and expenses** in a major way. You **CAN** get to the other side while maintaining your key technical team members – and boost morale along the way!

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