

Management

Successful reuse depends on a different kind of relationship among engineering teams. The teams behave as true partners, each concerned for and respectful of the legitimate needs and constraints of the other. Because this partnership is so critical to successful reuse, managers whose responsibilities span the producer and utilizer organizations need to understand the issues involved, support the reuse effort with computing and training resources, allow time for regular communication and joint decision-making by producers and utilizers, and acknowledge the value of the reuse investment.

This is no easy task when the next product's release is in danger of slipping and the return on the reuse investment will not be felt until products after the current product are in development. Nevertheless, without informed senior management involvement and support, producer and utilizer organizations find it difficult to behave as true partners, and typically fall back into the old ways of engineering software, which are the very ways they had decided to abandon because they would not meet future business needs.

In one HP organization, a lab manager endorsed a pilot reuse project for reengineering existing software into a more easily reused software platform. The lab manager's responsibilities spanned the platform engineering team and numerous product development teams that would use the platform. The lab manager's leadership and active involvement in understanding the issues, providing resources, and rewarding reusable results transformed the way software and firmware components for an entire product line were produced. The transformation did not take place overnight. However, the business is now producing four to six products per year rather than the one per year that it was producing four years ago when the reuse effort began. This has been accomplished with a modest increase in staffing and a great deal of software and firmware reuse or leverage.

In another business sector, a group of businesses agreed to cooperate on the development of a reusable software platform that could be used in numerous product lines. The senior management (R&D group managers) invested in the project and encouraged the individual businesses to invest senior technical contributors in the asset production effort. These senior technical contributors served as producers in the early months of the reuse effort. However, they were also responsible for representing the needs of their individual organizations as potential utilizers of the software platform. As a serendipitous result, the resulting platform was used to bootstrap a new business that had many of the same product capabilities that had been analyzed and designed into the reusable software, allowing HP to get to market substantially faster with a highly competitive product.

Unfortunately, there are also examples where talented engineers have developed solid technical solutions for reuse, but were unable to engage their targeted utilizers or were unable to get senior management involvement and active support. Eventually, each of these investments was abandoned with a return to the short-term product development methods that were not meeting business needs when the reuse effort began. There is a very strong correlation between engaging producers, utilizers, and managers and succeeding with reuse.

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