About 20 years ago I had just started to work as the head of new product development at a large Swiss technology corporation when we decided to evaluate and implement a 3D CAD and Product Data Management (PDM) system. Our primary motivation was to improve engineering efficiency and reduce product development costs. The scope was quite limited and included CAD data management, some document management, EBOM management, engineering workflow management and a semi-automated Manufacturing Resource Planning (MRP) interface. But that was pretty much all that was available in PDM systems at that time; the term Product Lifecycle Management (PLM) had not even been coined yet (see this article on PDM and PLM).

Looking back, we were really pushing the envelope at that time. The maturity we achieved in terms of technology adoption and process automation was very high compared with what was available and possible.

The same could not be said today. Since that time software vendors have introduced PLM and a host of new modules and functionality. The scope we implemented 20 years ago would barely scratch the surface of what is possible today.

As an example, Kalypso lists 34 different functional capability areas for PLM.

But how much of the available PLM capabilities do companies actually use today?

The answer is sobering.

Most companies do not use much more today than what was available 20 years ago.
Working with numerous clients over the last five years I found that the scope they have implemented and are using is very limited, in most cases not much more than the foundational capabilities shown in the graphic above. This means their PLM maturity is relatively low. Applying a maturity scale of 1 to 5, where 1 is no PLM at all and 5 is a fully integrated PLM system across the extended organization, I have found that their average PLM maturity is slightly over 2.

Figure 2: PLM Maturity

What does this mean for these companies? It means a tremendous loss of potential business value and a very low return on their investment. Capital is invested in software licenses whose available functionality is only partially utilized to manage CAD data, as well as some documents and engineering BOMs, and to automate a few engineering workflows.

With only a little incremental effort and investment in optimizing business processes and configuring the system, the same software licenses could be used to manage all product related data and information, including CAD data, all product-related documents, engineering and manufacturing BOMs (EBOMs and MBOMs), requirements, projects, resources, etc. and it could automate company-wide processes.

Most companies using PLM today would be well advised to conduct an assessment or diagnosis of the state of their current PLM deployment. They should look for ways to expand the system to utilize it more broadly across the entire organization and take better advantage of new capabilities.