

Innovation starts with interaction

Xtreme Technologies case study

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Technical challenges are a daily reality for many innovative companies. But creating innovation takes more than technical insight. You also need insight into the behavior, interactions and attitude of the individuals and teams involved. For Xtreme Technologies, developing this insight led to a major boost in team energy and performance. This helped the company deliver a demanding project on deadline and on budget, and see efficiency savings worth 100,000 euros per year.

Recognizing the challenge

Xtreme Technologies creates high performance products in the specialized world of extreme ultraviolet (EUV) light sources for semiconductor manufacturing. But it often struggled to meet project deadlines, budgets and specifications. How could it achieve the same high level of performance in these business critical areas as in its technical expertise?

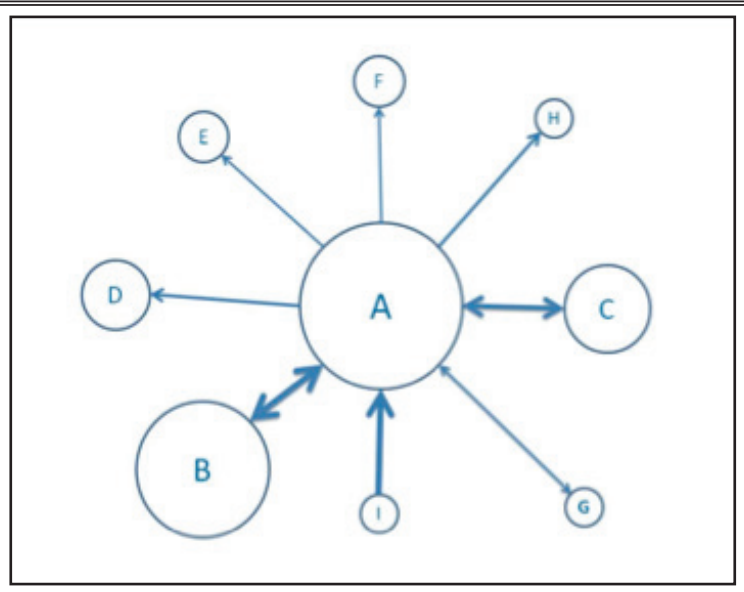
In April 2011, it turned to Chaos2Work experts in business performance with a background in high tech industries. Chaos2Work quickly re-

commended a way forward based on a two-fold approach which would raise team and business performance across the company.

Firstly, Chaos2Work would use the PIM* (Pattern Interpretation and Management) methodology to provide a quantified analysis of interactions at management level and identify improvement actions. Secondly, it would work with individual team members to give them insights into their own behaviors and interactions with colleagues.

Figure 1: 'hub and spoke' pattern

The PIM measurement showed a typical 'hub and spoke' pattern between the chairperson (A) and his managers as shown in this figure. The sizes of the circles indicate the number of utterances made, the direction and size of the arrows indicate the direction and intensity of engagement between the participants.



Team interactions: 360 degree scan

With support from the uppermost levels of the company, Chaos2Work began by ‘scanning’ a management meeting, using a 360 degree camera to monitor and gather data on reactions and interactions. The scan showed that, rather than group discussion, the chairperson would communicate ideas and managers would report to him, in a ‘hub and spoke’ pattern. [Figure 1].

The ratio of positive to negative utterances (the ‘P/N ratio’) was telling. Most of the statements by individuals were about problems, fault-finding or defensive justification of why things were not going smoothly.

These patterns were a warning sign. The ‘Losada model’ for team performance shows that such patterns typically characterize low performance and poor results. They tend to generate defensive behavior rather than constructive sharing or problem solving.

Assessing individual behavior

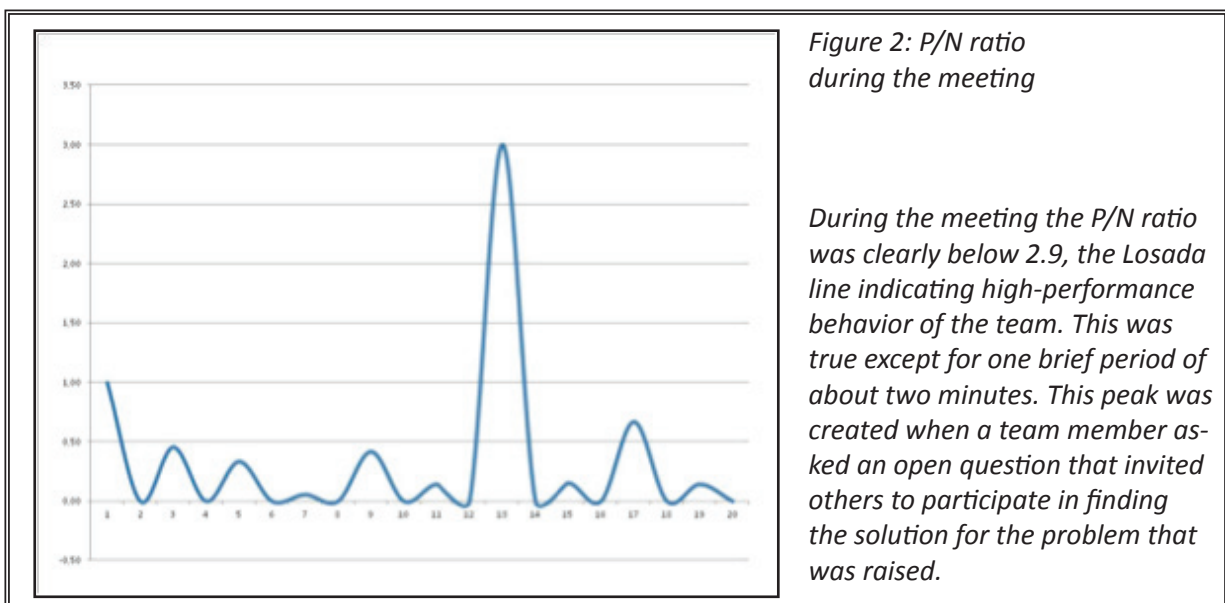
Next, Chaos2Work worked with individual team members using the Odin Development Compass (ODC) technique. This simple but powerful tool reveals people’s natural strengths as well as the unproductive behaviors they adopt in difficult situations.

When teams are willing to share their ODC results, it can transform how they work together. A natural strategist can be given more scope to lead, or someone’s seeming uncooperativeness recognized as genuine concern about a problem.

Constructive change

For Xtreme Technologies, PIM and ODC unlocked a new way of working. Management meetings were radically overhauled, including well-prepared agendas, actions points and ground rules such as no laptops.

One top manager agreed to step back and reduce his involvement. Participants were encouraged to formulate concerns as questions



rather than criticisms. For instance, “I see this as a clear and present danger. Does anyone else? If so, what can we do about it?”

Additionally, based on the personal assessments, certain people were identified to act as ‘adaptors’ to encourage questioning and ensure meetings remained positive.

Energy unlocked

The impact was immediate. Management meetings were reduced to one hour, while productivity was significantly enhanced. Each meeting generated constructive ideas and a clear action list.

Above all, attitudes changed. People became energized, feeling they could add value to the process by contributing. Meetings became a place to get things done.

Moreover, the new meeting approach offered a major cost savings for the company – an increased efficiency equivalent to 100,000 euros per year. Senior management in Japan noticed the change and congratulated the team on its new dynamism.

Project success

Importantly, this new behavior also helped Xtreme Technologies realize a major challenge. In April 2011, the company had set itself an ambitious target – to develop a new product for presentation at an international industry conference the following September.

Normally it would have used a modular product development approach. Product architects would have defined the initial specifications; then the design would be broken down into several modules, each with a dedicated team.

Parallel working can speed development. But there is a risk that teams focus on their individual challenges and that problems integrating

the various modules reveal themselves only at a very late stage.

Now, functioning as a high performance team, Xtreme Technologies approached the project more collaboratively. The project teams interacted effectively and openly, so the new product was ready on time and on budget. What’s more, its exceptional performance - lab tests showed a new world record in EUV performance - attracted considerable attention from academics and industry specialists at the conference.

Looking back to this remarkable period, Hans Scheuermann, Manager Product Development Division at Xtreme Technologies: “Within a single day Chaos2Work showed our potential as a team, and with just a few small adjustments they enabled us to make a giant leap in team performance.”

About the author

Bert Smeets creates high performing organizations and teams by applying small yet highly targeted actions. With customized solutions he focuses on linking the human factor to business goals. These solutions are based on his personal experience in business, life and sports. The basis for his work are chaos theory principles, hence the name of his company Chaos2work.

*The **PIM** (Pattern Interpretation and Management) methodology has been developed by **FACTOR+**, a strategic partner of Chaos2Work*