



Intercim *i*

SUCCESS STORY

OPERATIONAL EXCELLENCE FOR ALL

EADS has incorporated **Pertinence Suite** into its “EADS Black Belt” program for the continuous improvement of skills and quality



The Challenge

- Continuous improvement of performance and quality of the operational processes
- Systematic training of improvement for project managers involving complex and/or voluminous data for the “EADS Black Belt” program.
- Reduction of cycle time and extra costs associated with anomalies not understood or resolved.

The Solution

- Pertinence Suite powered by Velocity® Process Rules Discovery and Operation Advisor modules

The Benefits

- Improvement of First Pass Yield from 53% to 77% in engine MRO at the SECA site at Le Bourget (France)
- Solution to delamination problems on composite rotor elements at Eurocopter (Marignane site - France)
- Solution to porosity problems on tail sections at Airbus (Stade site in Germany)
- Solution to flatness defects on wing parts at Airbus UK
- Solution to defects in SPF/DB titanium slats at MTAD CASA (Spain)
- Average annual savings of €250,000 on each of the five projects completed

“*Pertinence Suite, which is an integral part of our EADS Black Belt program for the improvement of skills and quality, incorporated into the Lean and Six Sigma methodologies constitutes a true competitive advantage. But because we work with many partners and suppliers, it is important for us to promote this profit-enhancing tool among them. And we are still staying a year or so ahead of our competitors.*” **Bill Black, Chief Quality Officer of the EADS Group**

“Pertinence Suite is a really fantastic tool, from the moment that you come up against a problem in a manufacturing process that involves complex parameters or large quantities of data”, enthuses Bill Black, Chief Quality Officer of the EADS Group. Bill Black has needed no persuasion since 2004, following demonstrations by EADS’s IT department. They had just returned from testing Process Rule Discovery on a project that had been executed in partnership with the CNES. In six weeks, as opposed to several months with conventional methods, Process Rules Discovery had helped to identify a combination of parameters that were responsible for anomalies found during ground tests of Ariane V, resulting in a successful flight #158.

At the end of 2004, the EADS Quality Office purchased 10 Pertinence Suite licenses for an enterprise-wide initiative to improve quality. Pertinence Suite was then incorporated into their People Skills Improvement stream, called the “EADS Black Belt” program, alongside the Lean and Six Sigma methodologies. The objective of this Black Belt program was “to train, during a 4-week program, a core of experts devoted to the continuous improvement of performance and quality of their local operational processes”, states Bill Black. “The target audience was all those people who were managing the improvement programs and those staff members with high potential involved in these programs.”

Defects eliminated and savings increased dramatically thanks to Pertinence Suite

Each training course is organized around a defined project. Nearly 200 projects within the Group are currently running, of which ten (due to the number of licenses) necessitate the use of Pertinence Suite, lent for the occasion for one year by the Quality department. “Of these ten projects, five are now complete, and these allow us to test the degree to which this tool has brought us tangible benefits on the floor,” continues Bill Black. “The first concerns the EADS-SECA division, responsible for maintenance of the aircraft engines at the Le Bourget site near Paris. After engine assembly, 1.89 tests on average were necessary in order to achieve normal operation of the engine (i.e. a 53% first pass yield), while a single test would have been



EADS

- Created from the merger in July 2000 of Aerospatiale Matra SA, CASA (Construcciones Aeronauticas SA) and DaimlerChrysler Aerospace AG
- #2 globally, behind Boeing; the leading European company in the Aerospace and Defense sector in terms of annual financial turnover; and #1 globally in terms of order book
- 34 billion euros in sales in 2005
- More than 113,000 employees in France, Germany, Spain, United Kingdom and in countries worldwide

About Intercim

Intercim is a global leader in Manufacturing Operations Management (MOM) solutions for the aerospace & defense, automotive, pharmaceutical and semiconductor industries. Our flagship product, the Pertinence Suite powered by Velocity, is a truly innovative software solution that bridges the gap between product design and supply chain. Our unique technology empowers distributed teams to collaborate on process planning, execution and quality to reduce manufacturing costs, time to market and cycle time. With 25 years experience Intercim operates from offices throughout the US and in Europe. Its customers include industry leaders like Airbus, Ball Aerospace, BMW, Boeing, Honeywell, Intel, Sanofi Pasteur. Partnerships with Dassault Systèmes, SAP and Microsoft support the company in its mission to provide operational excellence for all.

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the ideal (i.e. 100%). This test rate obviously resulted in additional costs and delays. However, thanks to the Process Rules Discovery and Operation Advisor modules of the Pertinence Suite, this rate was reduced from 1.89 to 1.3 (first pass yield improved 24%), and this made a very significant contribution to the annual savings of 500,000 euros.

The second project, within the Eurocopter division, is the non-conformity of the composite used for helicopter rotors, which are made at the Marignane (France) site. A solution to the appearance of small bubbles in the composite had indeed been found but was not understood. Process Rules Discovery not only enabled this phenomenon to be understood, but also improved it to the extent of saving 154,000 euros on the initial cost of 162,000 euros linked to the problem. The next step was to determine the elements to be traced throughout the manufacturing process in order to achieve greater responsiveness.

The third project also concerned a porosity defect affecting 16% of aircraft tail sections manufactured on the Airbus site in Stade (Germany). At the end of two iterations of data analysis, Process Rules Discovery helped reduce this rate to 4%.

Pertinence Suite: a solution to promote among our partners

The fourth project, which was conducted within Airbus UK, succeeded in identifying the parameters responsible for a flatness defect in metal parts used on aircraft wings. This defect resulted in extra costs of approximately 600,000 euros per year. And finally, the fifth project concerns the process for the manufacturing of aircraft wing slats in the EADS MTAD CASA division (Spain). The defect, which was linked to the bonding at 2000°C of the titanium layers composing the wing slats that resulted in cycle time variations and extra costs, was reduced by 90,000 euros in 2006, thanks to Process Rules Discovery and its recommendations for operational practice improvements.

“These Intercim projects, with an average duration of six to eight months, generate average annual savings of 250,000 euros, which is more than the overall average savings of 150,000 euros per year generated by the “EADS Black Belt” projects of the Group”, says Bill Black. “These are very satisfactory results that should progressively persuade the divisions concerned to acquire their own licenses, in order to release those of the Quality department for use on many other projects currently put on hold.”

In addition, the EADS Quality division is actively promoting Pertinence Suite within the IAQG (International Aerospace Quality Group), in which it has been participating since its creation in 1999. This Group has set for itself the objective of setting and implementing standards for the improvement of quality and safety of aerospace products and services at every link of the procurement chain. “Almost 80% of the components that we use within the Group are outsourced to parts manufacturers and partners, or even to our direct competitors who are also members of the IAQG,” continues Bill Black. “Improving the performance of our operational processes and the quality of the 20% of parts that are produced internally does not seem to us to be sufficient. It is for this reason that we hope, through the IAQG, to persuade the sixty or so member companies to follow us in this quest for improvement - with Pertinence Suite of course.”