



Success



## Maintenance Management and TPM

Competence, innovation and flexibility made Wien-Aspern a best practice factory and one of the most productive GM Powertrain production sites worldwide. Since its foundation 25 years ago, the financial investment was about 2 100 Mio Euro and more than 26 Mio motors and gears were produced.



The methods of lean production contributed to a significant raise of production and productivity at GM Powertrain. Continuous improvements not only of products, but also in processes, work conditions, quality and customer relations are the focus of the programme. The effort and consequent implementation were remunerated. Against hard internal competition, Wien-Aspern won the production order for the new M20/32 gears in 2004 and could therefore ensure its future operations.

For the servicing of approx. 2 000 production lines and machines, the maintenance software IPC was introduced in the 1990s after a detailed product check and comparison. Today, IPC is the central planning and tracking tool for TPM®.

IPC introduction:

1990	Feasibility study
1993/94	Test operation und benchmark
1994/95	Specification and bidding
1996	Start implementation
	Step 1: Plant and material management
	Step 2: Service orders
1997	Step 3: Damage reporting, repairing
	Step 4: Analysis and reporting
2000	PLC Source Code Management
2001	Service component system
2003	Supplier tool, budgeting, adaptation of service schedule
2004>	Project M20/32 – data import from machine suppliers

IPC is overall used in the maintenance, production, planning, procurement and finance department and is linked to the main IT systems of the company.

The importance of IPC in maintenance operations:

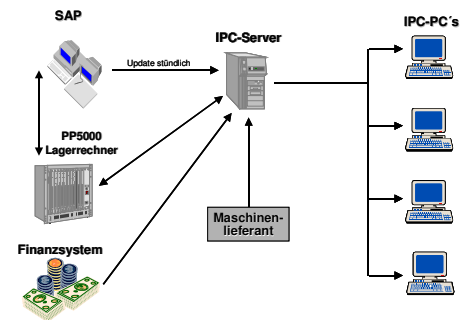
- Management of all service orders
- Control of service intervals (time and throughput based)
- Management of required service materials
- Ordering and reservation of materials
- Personnel resource planning
- Key performance indicators
- Reporting
- Planning, acquisition and tracking of all activities
- Downtime management
- Planning of repairs and revisions

### GAMED m.b.H.

Harter Strasse 48, A-8053 Graz, TEL +43 (0)316 27 86 60, FAX +43 (0)316 27 86 60-10, E-MAIL office@gamed.com  
Steiermärkische Sparkasse, KONTO 02400-510984, BLZ 20815, IBAN AT082081502400510984, BIC/SWIFT STSPAT2G  
Landes- als Handelsgericht Graz, FN 50094v, UID ATU28647907, RECHTSFORM Ges.m.b.H, WEBSITE www.gamed.com

The IPC quantity structure:

- Installed on 200 client PCs
- 600 active users
- 2 000 machines and plants
- 70 000 machine components
- 2 200 000 spare parts assigned to machines
- 90 000 service activities
- 100 000 defined service materials
- 150 000 finished service orders per year



The benefits for the company:

- Quick access on all important machine data
- Overview of planned and performed services
- Overview of pending and performed repairing orders
- Service analysis
- Damage and weakness analysis
- Cost and work analysis

The analysis and results of IPC were an important decision criterion for the new M20/32 project, which is essential for a long term safeguarding of the site.

The main features of the M20/32 project:

- 6-gear manual and automatic transmission
- Investment: 340 Mio Euro
- Capacity: 800 000 units per year
- Customers: Alfa Romeo, Fiat, Opel, Saab, Vauxhall
- Production: 400 machines
- Used area: 42 000 m<sup>2</sup>

Based on the analysis from IPC and on personnel experiences, a best practice manual for machine suppliers was released. Main items like maintenance intensity and strategy, spare parts management, documentation, installation and setup, energy consumption, waste disposal, training, etc. are defined and regulated for the new machine. The supplier also provides the structured data for an automatic data import in IPC.

**GAMED m.b.H.**

Harter Strasse 48, A-8053 Graz, TEL +43 (0)316 27 86 60, FAX +43 (0)316 27 86 60-10, E-MAIL office@gamed.com  
Steiermärkische Sparkasse, KONTO 02400-510984, BLZ 20815, IBAN AT082081502400510984, BIC/SWIFT STSPAT2G  
Landes- als Handelsgericht Graz, FN 50094v, UID ATU28647907, RECHTSFORM Ges.m.b.H, WEBSITE www.gamed.com