



KEY TECHNOLOGIES

Complex System Control and Supervision

Key words: *studies, engineering, project engineering, process control, facility supervision, facilities for the continuous collection/transport/analysis of samples, special machines, robotisation, fluid control (temperature and pressure) stations in industrial processes*

Complex facilities involve different technologies (electromechanics, electronics, pneumatics, optics, IT, and metrology), requiring coherence in:

- their use (with a focus on the interaction between the different technologies)
- the Human-Machine relation

Teams can provide expert services in the following areas:

- ▶ Advice for facility design, choice of technologies, follow-up of facility set-up, and subsequent documentation management
- ▶ Support to the operating phase (control, supervision, sensor management, procedures, flows, and maintenance)
- ▶ Design of training programs and practical training

SUPPORT TO BUSINESS SET-UP PROJECTS IN BASSE NORMANDIE

The Basse Normandie Region has rolled out all its resources to support business projects in the following areas:

- ▶ General funding
- ▶ Business project support
- ▶ Training programs
- ▶ Corporate user services at operations site
- ▶ Technology transfer to companies: www.gravir.org and www.crittbn.com

HUMAN POTENTIAL

- ▶ A scientific team of 40 researchers
- ▶ A technical team of 200 engineers



METHODS

The methods, skills and expertise draw on extensive experience at the regional industrial facilities where the teams have run checks on the 'tough spots' in operations, and been able to highlight the problems through studies conducted at 4 laboratories:

. **GREYC** (*Groupe de Recherche en Informatique, Image et Instrumentation de Caen*, the Caen group for IT, image and instrumentation research) www.info.unicaen.fr/GREYC/

. **LUSAC** (*Laboratoire Universitaire des Sciences Appliquées de Cherbourg*, the Cherbourg university laboratory of applied science) www.eic.unicaen.fr/LUSAC

. **LAP** (*Laboratoire d'Automatique des Procédés*, the laboratory for automated processes) www.greyc.ismra.fr/LAP/

. **LPC** (*Laboratoire de Physique Corpusculaire*, the laboratory of corpuscular physics) www.caeinfo.in2p3.fr

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