

#### What is e-Prelude?

- e-Prelude is a unique pedagogical internet environment for teaching ERP, Production Management and Supply Chain Management
- e-Prelude aims to enable students to do a complete tour of the ERP functions and understand their mechanisms and constraints
- e-Prelude is designed to be used individually: each participant performs the entire process of integrated management by achieving exercises. From the first training session, the participant can very quickly control the system and can thus focus on the conceptual content of training
- e-Prelude is used as a training tool by over 300 schools
- e-Prelude is a software training to all major functions of ERP.
- This software comes with slide presentations and progressive exercises

### e-Prelude.com Main Features

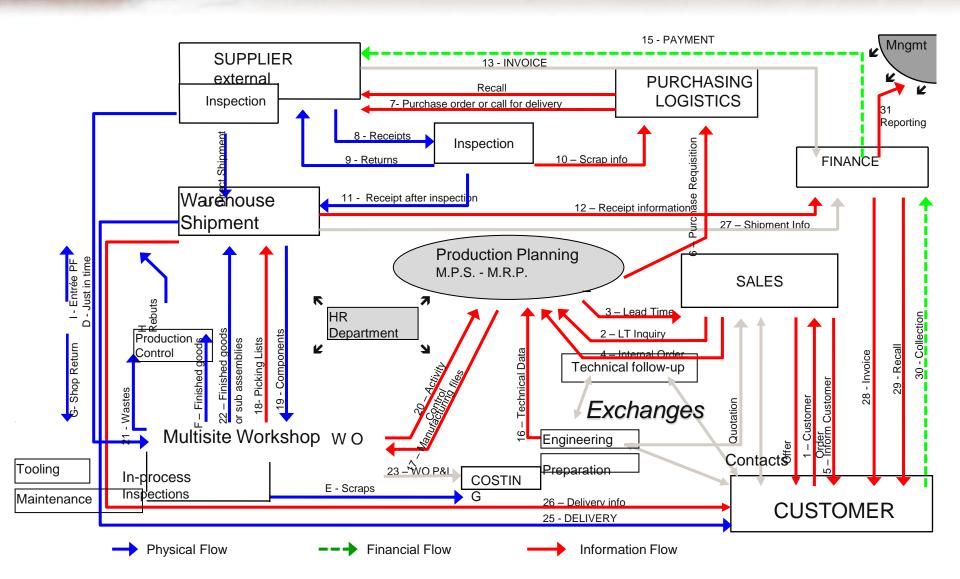
- Designed for education
- Simple but comprehensive ERP software
- Can be used anytime anywhere
- Can be tailored to the educational level required
- Can open an unlimited number of folders
- Network games
- Many exercises already prepared
- Slideshow presentations of the basic concepts

## Who e-Prelude is designed for?

- Students of technical high schools,
- Students in engineering or management,
- and the personnel of industrial enterprises,
- To illustrate the concepts of industrial management,
- → To prepare themselves to the use a commercial software



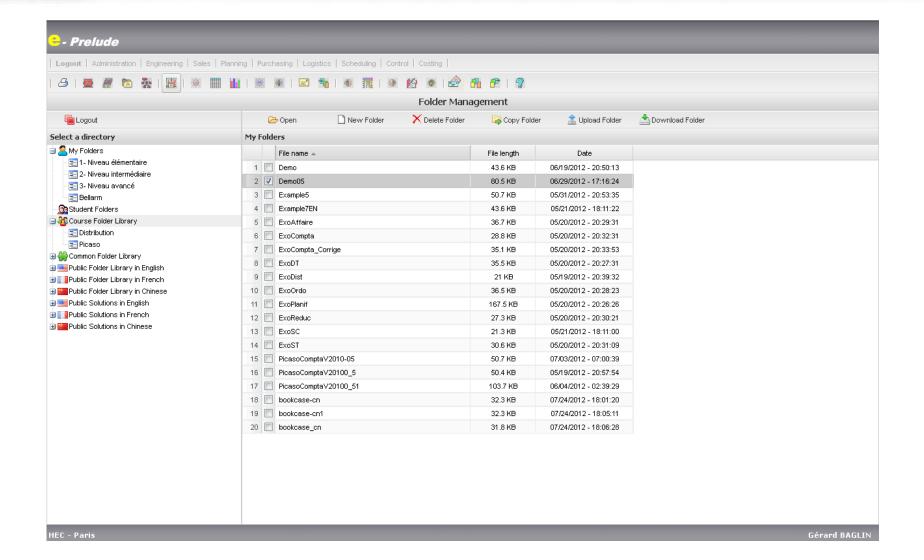
# **Example of integrated information flows**



#### Benefits for the students

- Easy access to all functions
- Friendly interface
- Can be used anytime anywhere outside the classroom, your work is saved on the server
- Can use your own computer
- Save successive situations, can come back to a previous situation

## Easy access to many folders



#### Benefits for the instructors

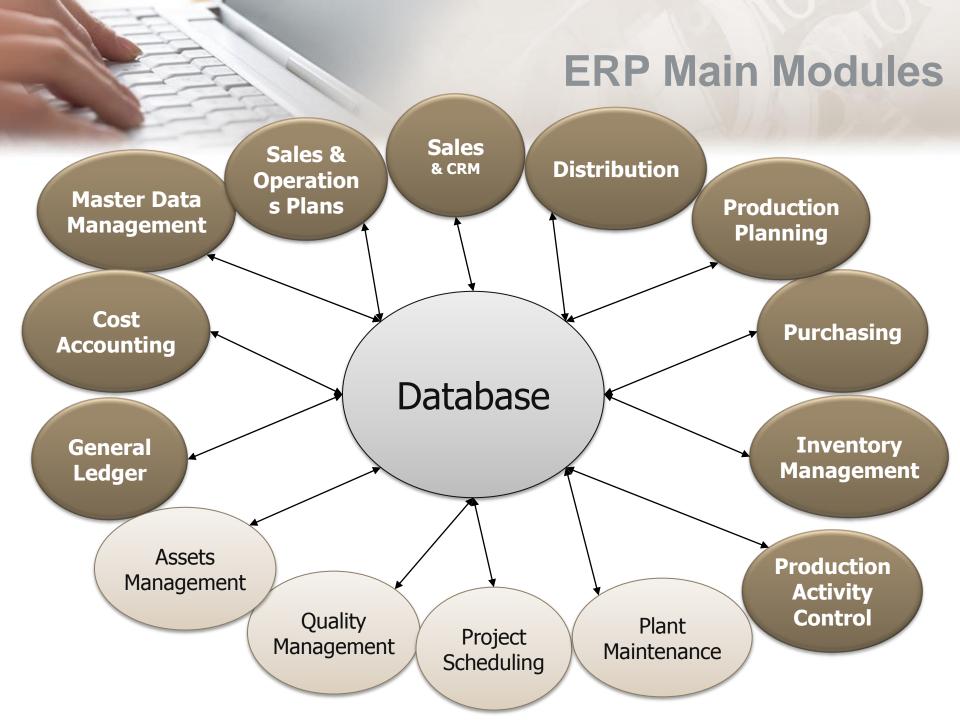
- No installation nor configuration problem
- Easily prepare the work given to each group of students
- Taylor the software to your needs
- Follow the work done by each student
- Students can work after the class
- Many exercises already prepared are made available to everyone

## Benefits for the organization

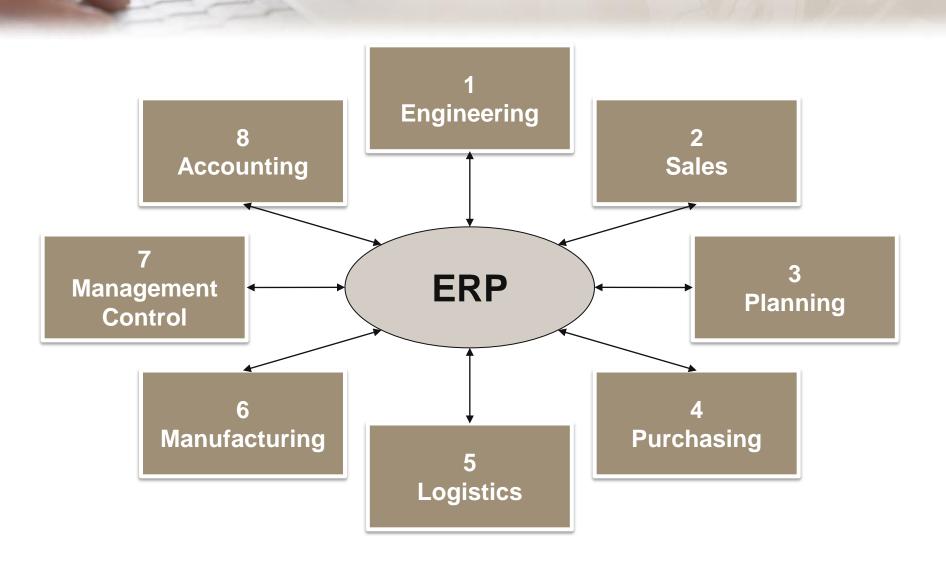
- No need to teach in a computer room: can be use anywhere if there is an internet access
- e-Prelude is distributed as a service
- Software always up to date (no need to install new releases)
- Flexible pay schemes

### e-Prelude Scope

- Master Data Management
- Sales
- Inventory Management
- Material Requirements Planning (MRP) and Capacity Requirements Planning (CRP)
- Purchasing Management
- Detailed scheduling and order release
- Production Activity Control
- Costing
- Sales & Operations Plan (S&OP)
- Distribution
- Accounts receivable (AR) and payable (AP)
- General Ledger



# All the business functions are involved



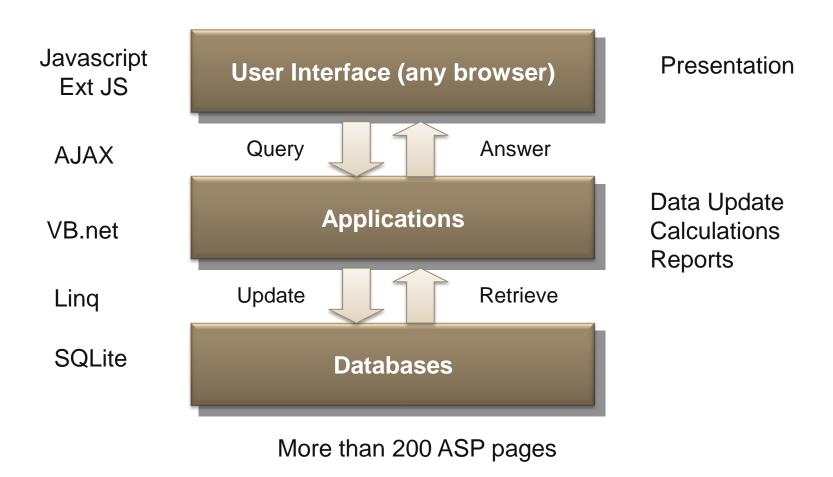
## Operation Management Goals

- Deliver Customer Orders on time at the lowest cost
- Required:
  - Adjust capacity Utilization (machine and labor)
  - Have all the necessary components at the right time
  - Appraise all costs incurred

#### Constraints:

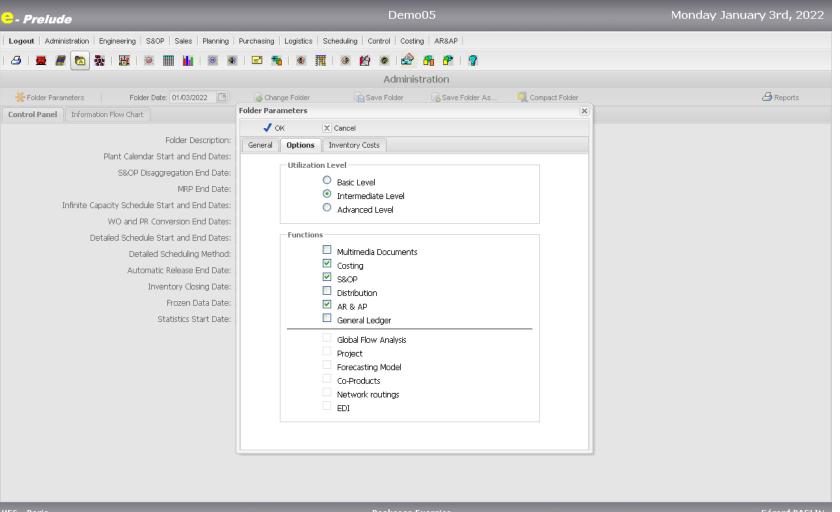
- Manage numerous data
- Manage complex relations
- Provide real time information

#### IT Architecture

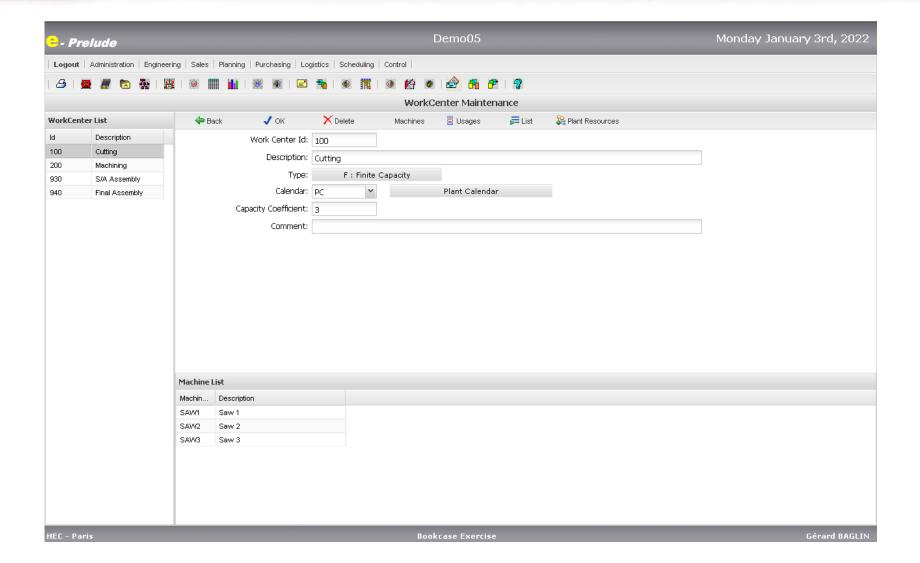


**ASP.net / Windows Server 2008** 

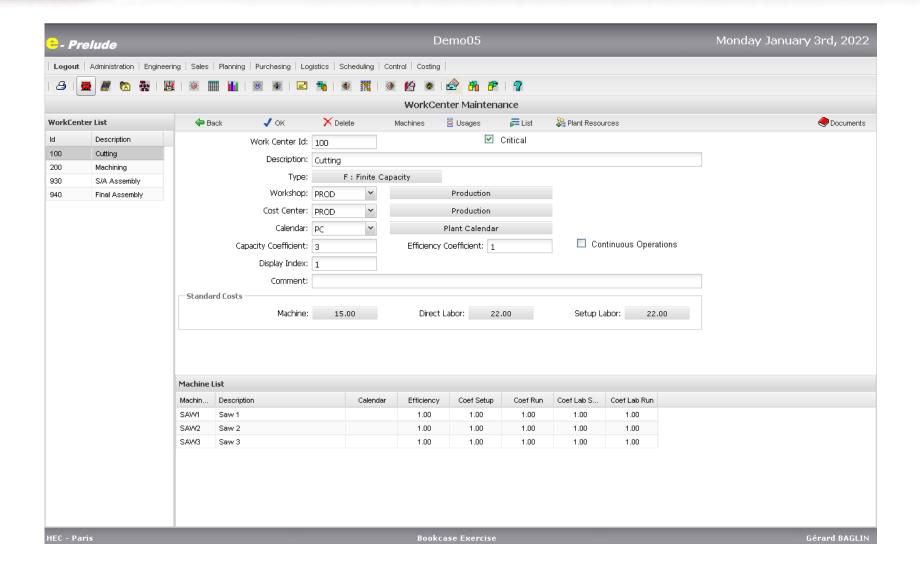
## **Usage Level and functions** selection



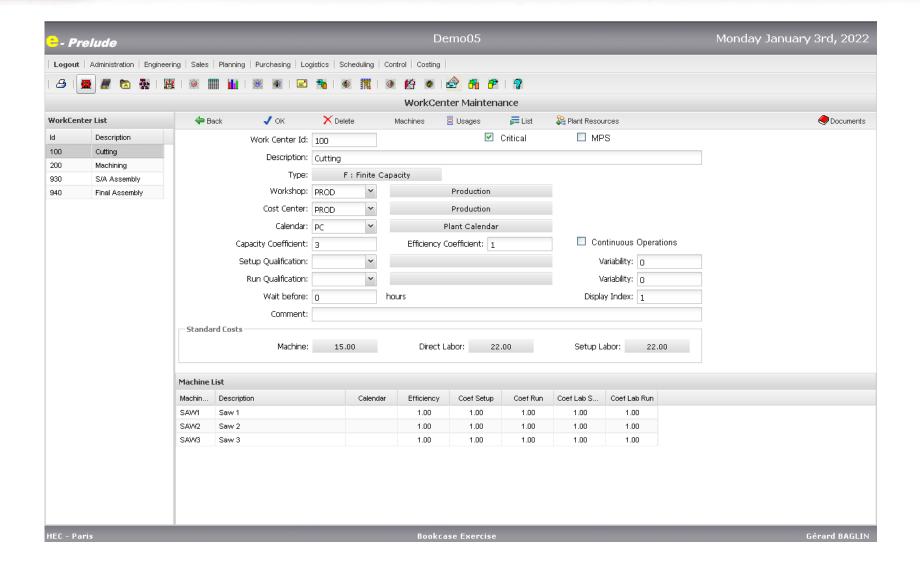
#### **Basic Level**



#### Intermediate level



#### **Advanced Level**



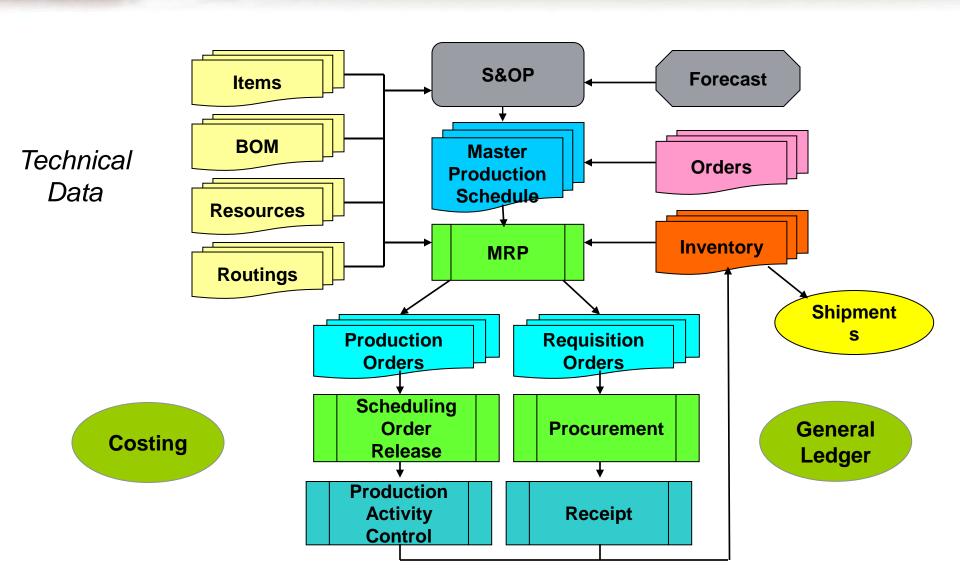
# Manufacturing Management Decisions

- Long term (months): S&Op
  - Alter resource capacity, decide investments
  - Split work load over sites
- Mid term (weeks): MRP CRP
  - Alter production capacity (working hours, sub-contracting),
  - Smooth work load
- Short term (days): Detailed Scheduling
  - Adjust production capacity
  - Manage priorities
  - Avoid delays

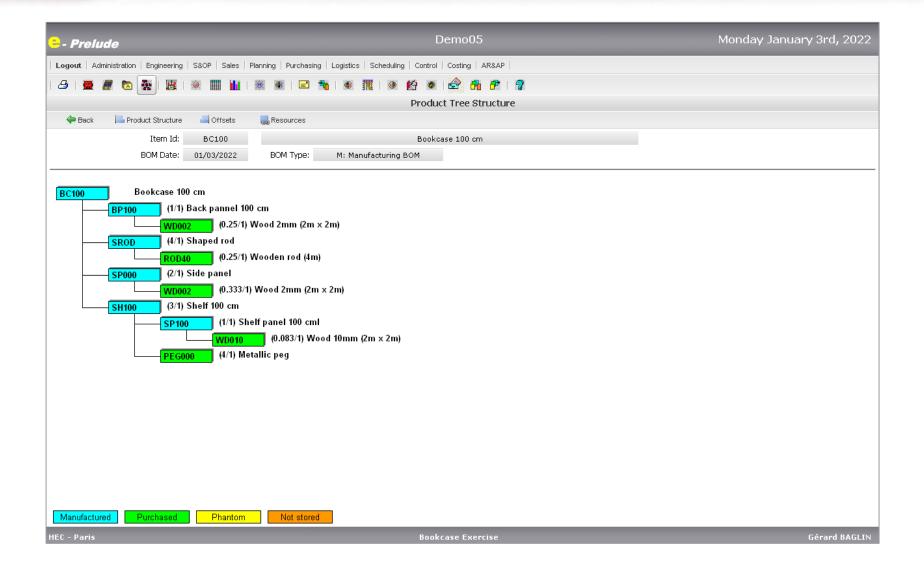
## Three Management Horizons

- Long term: Capacity Management
  - Calculation of capacity required for machine and labor, and adjustment decisions
  - Allocation of products to plants
- Mid term: Materials Management
  - Material requirements calculation
  - Determination of work orders and requisition orders
  - Vendor order placement
- Short term: Workshop Management
  - Work order release
  - Fabrication progress reporting
  - Performance Measurement

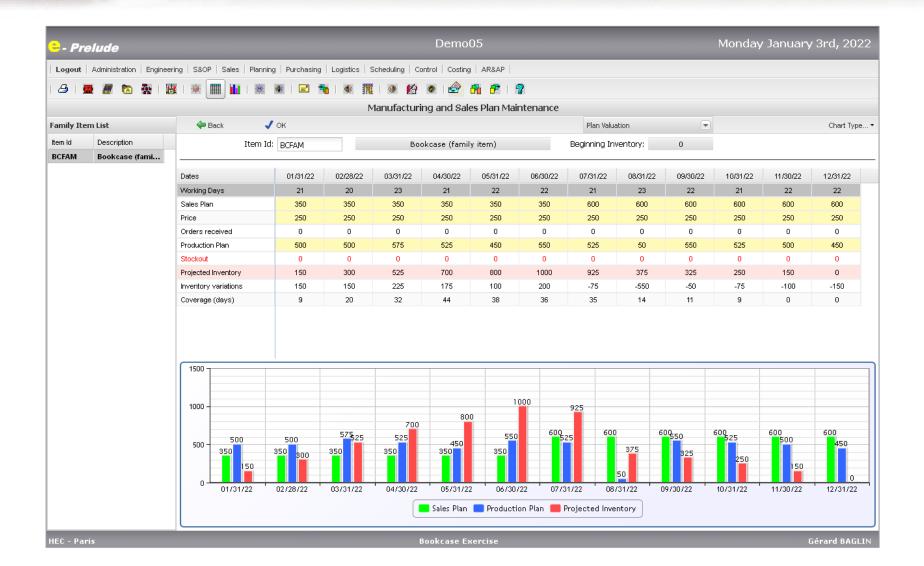
## The Operation Planning Process



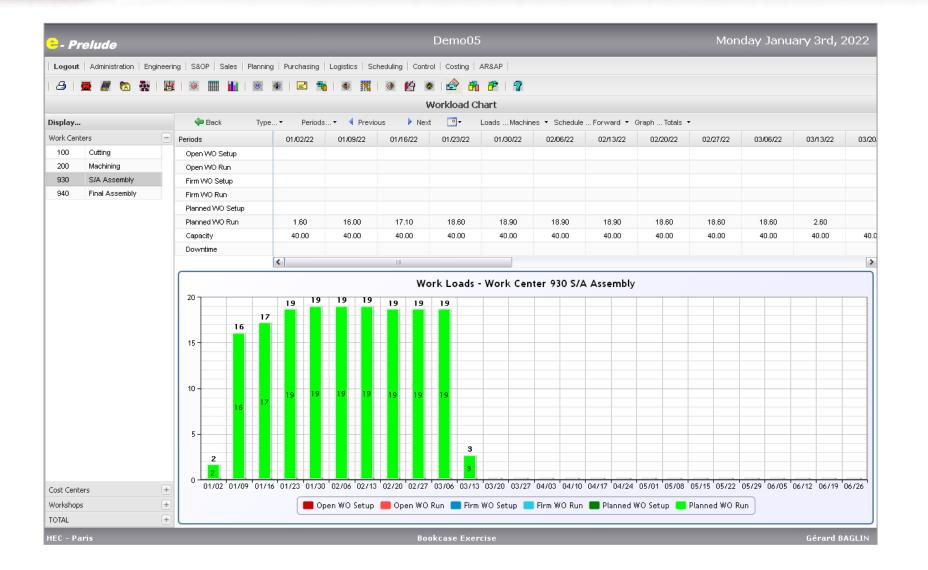
## **Graphics representations**



## Sales & Operations Plans



# **Capacity Requirements Planning**



### **Detailed Scheduling**

