Gestion de Project

- **Dernier cours en visio**
    - **Fin Chapitre 6 / Chapitre 7**
    - **Zoom : quand le meeting se deconnecte, veuillez recliquer sur le lien**

- **Exams :**
    - Reportés jusqu’ à la fin du confinement.
    - 1h pour EXAM1 et 1h pour EXAM2 sont à planifier en Decembre (si possible) autrement backup solution à mettre en place

Summary of 06NOV20

Chapter 6 : Project Quality Management

Project Quality Concepts

- **Customers Satisfaction**
  Each company, each organization, … depend on Customers so :
  - Need to ***understand customers requirements*** by evaluating and defining customers expectations
  - ***Meet customers requirements*** by managing their expectations
  - Try ***to exceed customers expectations***

- **Prevention versus Inspection :** Preventing errors in a process is typically less expensive than fixing / correcting them when they are found by inspection or by usage.

- The **Cost of Quality (COQ)** : Money spent during the project to avoid failures and money spent during and after the project because of failures. → **Preventing errors is typically less expensive than fixing them by inspection**
  - **Cost of Conformance :**
    - **Prevention Costs:** Cost incurred **to prevent** (keep failure and appraisal cost to a minimum) **poor quality**.
    - **Inspection (appraisal) Costs :** Cost incurred to **determine the degree of conformance to quality requirements** (measuring, evaluating or auditing)
  - **Cost of Nonconformance** :
    - **Internal Failure Costs :** Cost associated to defect found **before the customer receives the product or service**.
    - **External Failure Costs :** Cost associated to defect found **after the customer receives the product or service**.

Project Quality Concepts

- **Continuous Improvement**
  - **W.Edwards Deming :** introducing **statistical process control techniques** with **PDCA Cycle or simply Deming Cycle**

The ACT stage focuses on implementing the process within the organization or with its customers and suppliers

PLAN stage involves analyzing the current situation, gathering data, real causes and define corrective actions

The four steps Plan, Do, Check and Action should be repeated over time to ensure continuous learning and improvements in a function, product or process.

The CHECK stage requires determining whether the trial process is working as intended, whether any revisions are needed, or whether is should be scrapped.

ge involves testing tives experimentally establishing a pilot process, or trying it out with small number of customers

Project Quality Concepts

- **Continuous Improvement : Six Sigma** :
  - Six Sigma is **a quality Management model that incorporates a strategy using statistical tools**
  - **Objective :** reduce process output variation so this will result in **no more than 3.4 defect parts per million**
  - **Six Sigma represents six standard deviations from mother mean to the upper and lower specification limits (→** Avoir un process Six Sigma signifie que l'écart entre la limite de spécification basse et la limite de spécification haute du client peut contenir six fois l'écart-type (ou sigma) de la courbe de production du process.)

- **Total Quality Management :** TQM, from **Dr Armand Feigenbaum ,** also known as total productive maintenance, describes a management approach to long-term success through customer satisfaction. In a TQM effort, all members of an organization participate in improving processes, products, services and the culture in which they work

- **The Capability Maturity Model Integration (CMMI®)** is a capability improvement model that can be adapted to solve *any* performance issue at *any* level of the organization in *any* industry.
  - CMMI uses 5 levels to describe the maturity of the organization
  - CMMI describes the key elements of an effective Software process

Project Quality Management

- **Main Quality Movements / Major Contributors** :

Contributors	Principles
W.E Deming (1900-1993)	▪ **PDCA Cycle** ▪ **Rule of 85 : 85% of the cost of quality is the responsibility of management**
Joseph M.Juran (1904-2008)	▪ **“Quality is free”** ▪ **Pareto Principle *(80/20 Rule)* : 80% of a problem is caused by 20% of the causes**
Philip B.Crosby (1926-2001)	▪ **“Doing It Right the First Time”** ▪ **Crosby's Zero Defects**
Dr Genichi Taguchi (1924-2012)	▪ **Statistical methods**
Dr Kaoru Ishikawa (1915-1989)	▪ **Cause and effect diagram** (also called the "Ishikawa" or "fishbone" diagram)
Dr Armand Feigenbaum (1922-2014)	▪ **Total Quality Management (TQM).**

EXAM PREPARATION

1. Which of the following is an important tool to identify the root causes or contributors to a problem, error, or defect?

A. Fishbone diagrams
B. Control charts
C. Histograms
D. Pareto Diagrams

2. The Plan-Do-Check-Act (PDCA) cycle as the basis for quality improvement is usually attributed to:

A. Deming
B. Crosby
C.Juran
D. Pareto

3. There is a serious defect in the finished product of a project that was completed a few months ago, resulting in a recall campaign to recall the defective products. What would be the best classification for these types of costs?

A. Cost performance index
B. Cost variance
C. Cost of conformance
D. Cost of nonconformance