# **Vehicle System Design**





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## **Module description**



#### Summary



- 1- Digital for Design
- 2- Design for Digital

#### **Digital for Design - Communication**

Phone

- □ Cellphone
- Email
- □ Tchat
- □ Forum
- Online meetings



#### **Digital for Design – Actual Simulation SW**

Mathlab

- □ Catia V6
- □ Cave (3D simulation)
- □ Customer database (built with specific fleet)

#### □ 3D printing

#### **Digital for Design – Opportunities**

#### □ Virtual reality - Style





## **Digital for Design – Opportunities**

## □ Virtual reality - Mounting



## **Digital for Design – Opportunities**

#### Database from connected vehicle



## A major tool for design = to know the customer behaviour

#### Summary



- 1- Digital for Design
- 2- Design for Digital

## **Design for Digital**

#### 3 groups : choose a connected technology for vehicle

- □ 45 min : Vehicle design
  - Imagine a short product specification
  - Translate in automotive language
  - Translate in physical language
  - Identify organic and fonctional impacts

□ 30 min : Groupe Synthesis

## **Design for Digital – New inputs**

Fonctional



#### □ New components





#### **D** Electrical architecture



#### □ Software

## **Design for Digital – Organisation**

#### System architecture

<b>Stakeholders</b> Design	Through	life services Users General audience	Physical/Technical environment
Services Road	Securi <sup>.</sup> Driving	ty Entertainment & Comm Environment (resist)	unication Economics Comfort
Functions Enable access &	protection	Provide Multimedia & Navigation Interface environment & vehicle	Provide Cabin Comfort & commodity Interface human & vehicle Store, Transform & Deliver Energies
Components			

## **Design for Digital – Time lines**

- □ Infrastructure planning = 10 years
- □ Vehicle planning = 4 years
- □ Smartphone planning = 1 year
- □ Apps planning = 3 months