Digital Industrial Platform French Contribution

I. Smart connected factory

- What is the current landscape of activities in Europe (national initiatives, EU funded activities, other)?
  Example : the CEA Factory Lab :
  - Collaborative initiative leading to a technological solution integration environment (software or physical) in order to integrate devices into functional demonstrators
  - A minimum of 40M€ investment over 5 years, supported by national program (PIAVE)
  - Target : 20 projects/year
  - Open platform : Possible cooperations with other partners according to the coming projects (CEA LIST, Dassault System, DCNS, PSA,….)
  - It gathers together three categories of actors :
    ⇨ Final users : express their needs
    ⇨ Academics and R&D organisms : bring technological innovations (software or physical)
    ⇨ Suppliers : bring mature technological services, short projects (6 months to 2 years) for demonstration, validation of system specifications

- Where do we want to go?
  o What kinds of next-generation platforms are needed (if any)?
  A standard implementation platform would be useful in order to test news services/devices and verify that :
  - the new services/devices match the standard definition ;
  - these services/devices are really interoperable
    o What kinds of large-scale federating initiatives are needed (if any)?
    o What concrete gaps/problems could be addressed through platform development and large-scale initiatives at EU level?
  Interoperability.

- How do we bridge the gap between what we have and what we want to achieve?
  o What concrete platform building initiatives and large-scale pilots can be expected/supported/promoted?
  o How to combine large-scale demonstrators across the EU and across Member States, taking into account already ongoing national developments?
  Establishing common roadmaps between PPPs and national federating organizations (like the Alliance for the Industry of the Future) could be a good starting point.

- Who are the main stakeholders to be involved?
  o How can PPPs contribute to building platforms?

Through European calls for projects that would permit for example to launch initiatives on the model of Autosar, organization dedicated to data standardization.

> o   How can existing/planned MS initiatives contribute to building platforms?

It could be relevant to analyze the similarities and discrepancies between existing national platforms in order to design a PPP corresponding to the main expectations observed in the ecosystems.

> o   What are the complementarities/synergies/needs for coordination between EU (PPPs) and MS levels? How to avoid overlaps and strengthen synergies?

It would be necessary to establish a place of exchange between all the stakeholders.

For example, in an instance initiated by a PPP or a grouping of PPPs with representatives of national call on the same topic topics.

II.   Smart agriculture

1. What is the current landscape of activities in Europe (national initiatives, EU funded activities, other)?

Two important projects to mention:

- the API-AGRO platform of ACTA and APCA, optimizing the services given in terms of system evaluation results by sharing common agronomic references made available by the partners. http://www.lafranceagricole.fr/actualites/big-data-lacta-et-lapca-concretisent-lapi-agro-1,0,3302313099.html

- Agro EDI, an association that organizes and standardizes the exchange of computerized data in the sectors: standardization of exchanges and deployment of their uses at all levels of the Supply Chain for interoperability of the actors. http://agroedieurope.fr/

2. Where do we want to go?
   a. What kinds of next-generation platforms are needed (if any)?
   b. What kinds of large-scale federating initiatives are needed (if any)?
   c. What concrete gaps/problems could be addressed through platform development and large-scale initiatives at EU level?

The CAP should play its rightful role in creating a favorable environment for the development of a European offer for the development of agricultural data in order to guarantee farmers access to information and data control.

The European Union could play an important role here, for example by helping to finance investments in emerging technologies and by deploying a European platform for data and related services.

3. How do we bridge the gap between what we have and what we want to achieve?
   a. What concrete platform building initiatives and large-scale pilots can be expected/supported/promoted?
   b. How to combine large-scale demonstrators across the EU and across Member States, taking into account already ongoing national developments?

4. Who are the main stakeholders to be involved?

a. How can PPPs contribute to building platforms?
b. How can existing/planned MS initiatives contribute to building platforms?
c. What are the complementarities/synergies/needs for coordination between EU (PPPs) and MS levels? How to avoid overlaps and strengthen synergies?

III.   Smart health & care

1. What is the current landscape of activities in Europe (national initiatives, EU funded activities, other)?

2. Where do we want to go?
   a. What kinds of next-generation platforms are needed (if any)?
   b. What kinds of large-scale federating initiatives are needed (if any)?
   c. What concrete gaps/problems could be addressed through platform development and large-scale initiatives at EU level?

It is often difficult to go beyond national platforms, as each country has its own specific regulatory rules on this particular topic.

It seems difficult to imagine setting up a single platform on the health theme. The platforms will most probably be specific: imaging, telemonitoring, teleconsultation, genome, etc.

3. How do we bridge the gap between what we have and what we want to achieve?
   a. What concrete platform building initiatives and large-scale pilots can be expected/supported/promoted?
   b. How to combine large-scale demonstrators across the EU and across Member States, taking into account already ongoing national developments?

4. Who are the main stakeholders to be involved?
   a. How can PPPs contribute to building platforms?
   b. How can existing/planned MS initiatives contribute to building platforms?
   c. What are the complementarities/synergies/needs for coordination between EU (PPPs) and MS levels? How to avoid overlaps and strengthen synergies?

IV.   Connected Autonomous Driving

1. What is the current landscape of activities in Europe (national initiatives, EU funded activities, other)?

Example : SCOOP@F Project is about a pre-deployment of connected facilities on several French roads, co-financed by UE and France :
   o 5 test sites :
      ▪ Intercity roads in Ile-de-France
      ▪ Bretagne (Highway)
      ▪ Paris-Strasbourg Highway
      ▪ Bordeaux and its by-pass roas

- County roads in Isère
    - In each test site, roads and vehicles will communicate through wireless networks with automotive WIFI (802.11p) with specific infra and public GSM networks ;
    - Two main goals :
        - Enhance safety and travel quality
        - Cutting-edge traffic management
    - This project is linked with other European ITS project

2. Where do we want to go?
    a. What kinds of next-generation platforms are needed (if any)?
    b. What kinds of large-scale federating initiatives are needed (if any)?
    c. What concrete gaps/problems could be addressed through platform development and large-scale initiatives at EU level?

We need an UE wide, at least, harmonization of the legal framework of vehicle-generated data access and common rules for data storage, sharing and business.

No need for special platforms, there is already a proposition from automotive industry for a platform architecture to ensure customer privacy and vehicle security (See ACEA position paper about extended vehicles).

3. How do we bridge the gap between what we have and what we want to achieve?
    a. What concrete platform building initiatives and large-scale pilots can be expected/supported/promoted?
    b. How to combine large-scale demonstrators across the EU and across Member States, taking into account already ongoing national developments?

Large-scale demonstrators are already launched in several MS, there is no need for new projects before having the results of the current ones.

There is a need about an international or at least EU wide regulation about vehicle-generated data sharing.

4. Who are the main stakeholders to be involved?
    a. How can PPPs contribute to building platforms?
    b. How can existing/planned MS initiatives contribute to building platforms?
    c. What are the complementarities/synergies/needs for coordination between EU (PPPs) and MS levels? How to avoid overlaps and strengthen synergies?

V.   IoT

1. What is the current landscape of activities in Europe (national initiatives, EU funded activities, other)?

Exemple : the S3P platform
- The S3P Project aims at developing a safe, secure and smart software development and execution platform (the S3 Platform) to facilitate the development, deployment and exploitation of IoT Devices, Gateway and Applications at the best cost and speed.

- The development of the S3 Platform is supported by the S3P Project, a 45 M€ investment project, that is financially supported by the S3P Consortium members and by the French Government "Nouvelle France Industrielle" initiative with a 18.3 M€ government funding.
- The S3P Platform is a technology and development stack ecosystem that is open and interoperable with all major IoT platforms in the world and will add specific value in a number of well-defined areas:
  - Security : Enable the development of application software and execution platform on devices that are secure and certifiable from the point of view of IT security.
  - Industrial safety : Enable the development of critical smart connected devices, certifiable from the industrial safety point of view for the most dependable and critical industrial devices, such as aircraft engines, autonomous vehicles, energy production systems, medical devices, etc
  - Portability : the S3P Platform develops extremely low footprint but high portability solutions onto various processing, networking and execution platform environments

Other Example : CHESS, a platform set up by the Technological Research Institute IRT System'X, dedicated to test the level of security of hyperconnected environment

2. Where do we want to go?
   a. What kinds of next-generation platforms are needed (if any)?
   b. What kinds of large-scale federating initiatives are needed (if any)?
   c. What concrete gaps/problems could be addressed through platform development and large-scale initiatives at EU level?

Towards an European standard platform agnostic of hardware.

3. How do we bridge the gap between what we have and what we want to achieve?
   a. What concrete platform building initiatives and large-scale pilots can be expected/supported/promoted?
   b. How to combine large-scale demonstrators across the EU and across Member States, taking into account already ongoing national developments?

Enlarge the scope of S3P with additional/complementary projects in order to improve interoperability of S3P platform.

4. Who are the main stakeholders to be involved?
   a. How can PPPs contribute to building platforms?
   b. How can existing/planned MS initiatives contribute to building platforms?
   c. What are the complementarities/synergies/needs for coordination between EU (PPPs) and MS levels? How to avoid overlaps and strengthen synergies?

More European industrial users in projects in order to adopt this standard and increase the audience.

VI.   Data

1. What is the current landscape of activities in Europe (national initiatives, EU funded activities, other)?

Example : The EU funded project OZWILLO offers an open solution for data storage, integration and reuse:

−   Easy integration of all type of data
−   Controlling access to data
−   Generic API to reuse data
−   Legal framework compliance
−   Visualization tools
−   Etc.

2. Where do we want to go?
    a. What kinds of next-generation platforms are needed (if any)?
    b. What kinds of large-scale federating initiatives are needed (if any)?
    c. What concrete gaps/problems could be addressed through platform development and large-scale initiatives at EU level?

In order to avoid trust and safety issues resulting in one actor getting all the data, it may be relevant to push further collaborative initiatives aiming at developing opensource solutions for data storage, integration and reuse. Such solutions can easily be reappropriated by any company without having to give their data to others.

3. How do we bridge the gap between what we have and what we want to achieve?
    a. What concrete platform building initiatives and large-scale pilots can be expected/supported/promoted?
    b. How to combine large-scale demonstrators across the EU and across Member States, taking into account already ongoing national developments?

These kinds of projects need to be initiated at the European level, in order to gather together enough European actors so that the final product is not oriented toward one particular solution.

4. Who are the main stakeholders to be involved?
    a. How can PPPs contribute to building platforms?
    b. How can existing/planned MS initiatives contribute to building platforms?
    c. What are the complementarities/synergies/needs for coordination between EU (PPPs) and MS levels? How to avoid overlaps and strengthen synergies?