



**ECO-INNOVERA**



# SuWAS

## - Sustainable Waste Management Strategy for Green Printing Industry Business -

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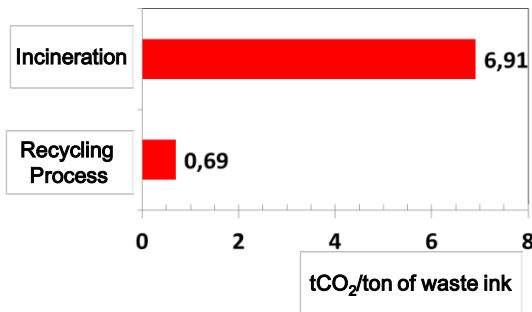
# Headline

- **Background**
- **Project Overview**
- **WP's Description**
- **Project Management**

## Challenges & Motivation of SuWAS project

- Environmental Pollutants ( $\text{CO}_2$ ,  $\text{NO}_x$ ,  $\text{PAH}_s$ ) of conventional waste treatment process (incineration)
- Socio-Economic Issues of conventional waste ink treatment system
- Low applicability of advanced recycling technology in printing industry

### Environmental Impacts



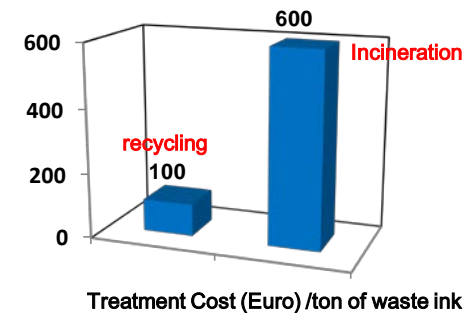
Source. ECO-INNOVATION project , SPAIN (Alicante Univ.), 2010

### EU Waste Legislation

- WFD, 2020 Recycling Target  
–70 % recycling for Industrial Waste by 2020  
► *to boost greater waste recycling & supporting underpinning Markets*

Source. WFD (Waste Framework Directive) the EU Council on October 21, 2008

### Socio-Economic Impacts



- Various Applicability of implementation strategy in other waste recycling industry

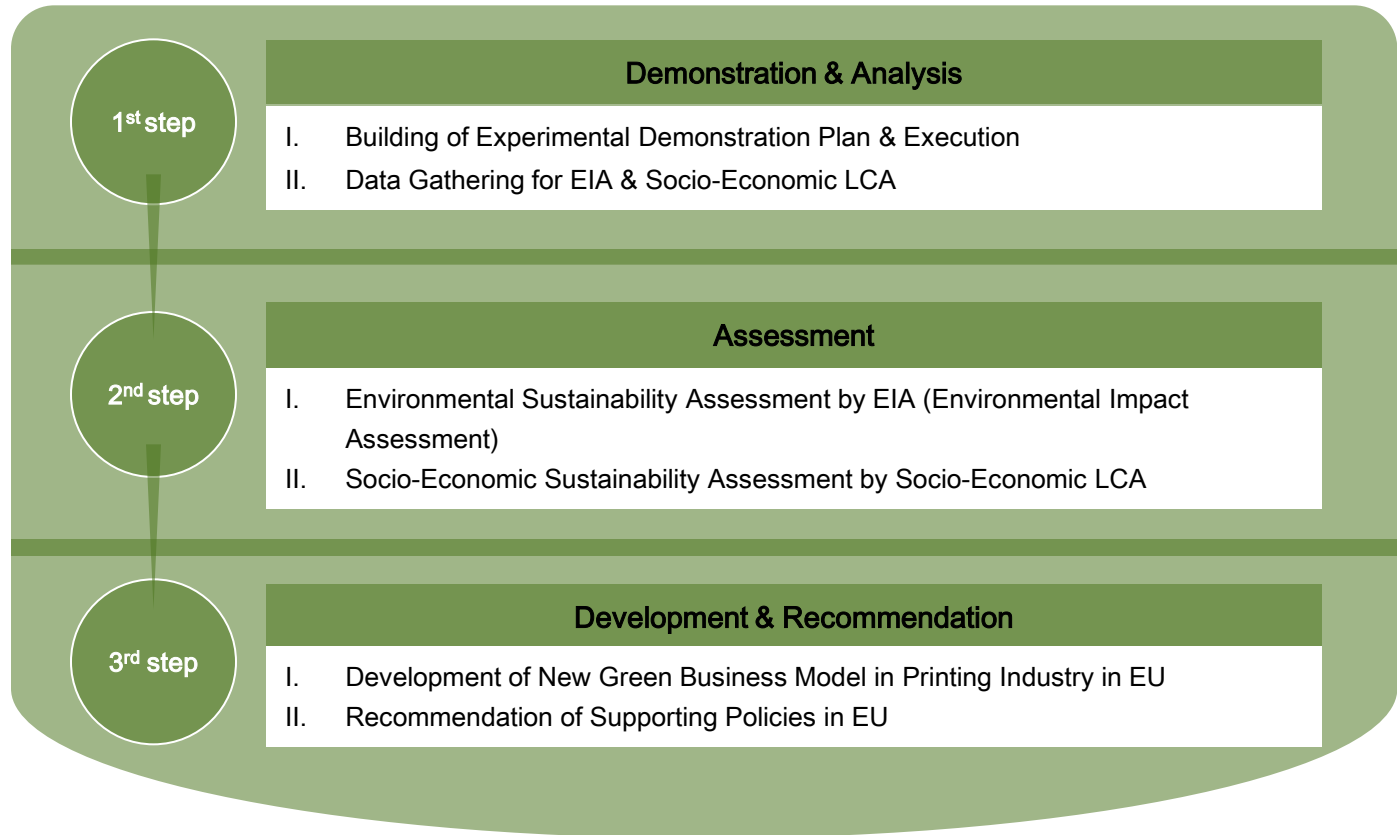
Source. Economic Report, SPAIN, 2008

For improving applicability of advanced tech. for recycling of waste ink in printing industry in EU,  
**Sustainable Implementation Strategy and Technology Analysis & Assessment**  
have to be established!

## Challenges & Motivation of SuWAS project

- **Aim;**  
Establishment of environmental & socio-economic welfare in EU through successful adaptation of recycling technology in printing industry

- **Main Contents;**

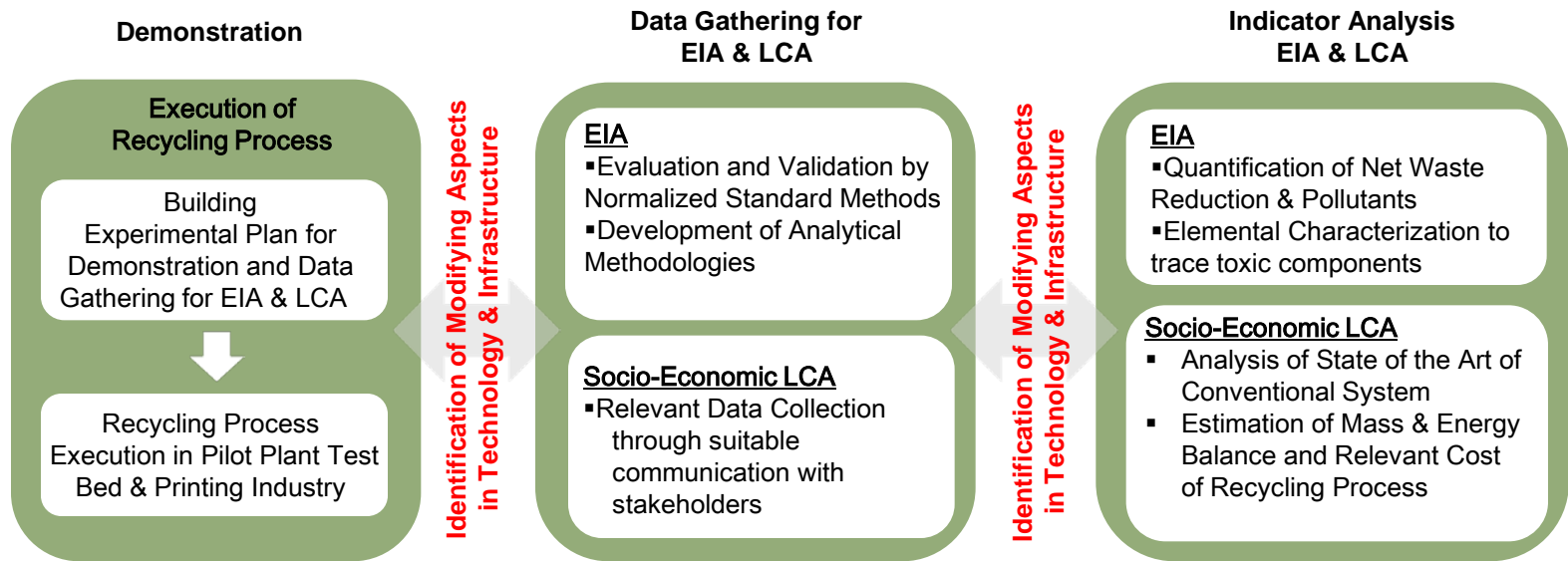


## Building experimental demonstration plan & Execution and Data Gathering for EIA & LCA

### Contents

- Planning of experimental demonstration & building of an execution plan of test bed
- Execution of recycling process in test bed and printing industry
- Gathering of data for EIA, LCA by execution recycling technology in Pilot and Industrial Scale

### Methodologies



### Final Deliverables

- Analysis report on the state-of-the-art of conventional current waste ink management systems
- Execution plan for experimental demonstration in test bed and printing industry
- Data report with experimental results obtained according to developed methodologies which will be used for EIA and social & Economic LCA

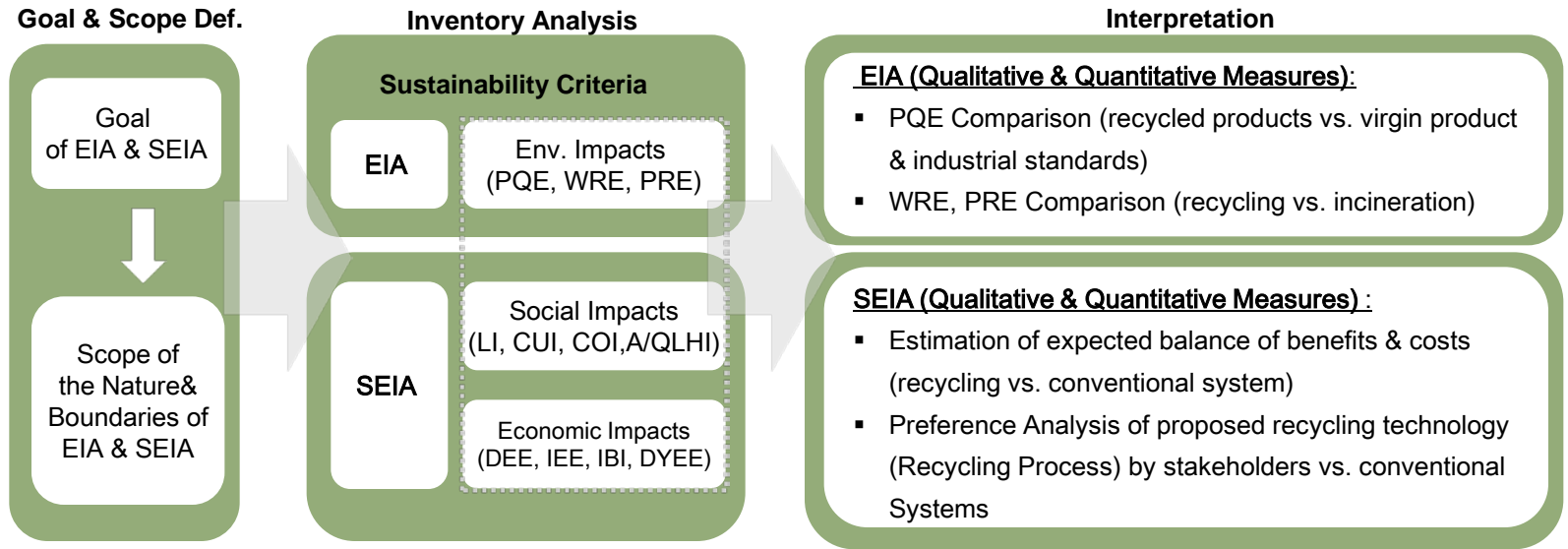
# Sustainability Assessment of Recycling Process Adaptation in Printing Industry

## Environmental Impact Assessment (EIA) & Socio-Economic Impact Assessment (SEIA)

### Contents

- Identification of qualitative & quantitative measures for EIA and SEIA
- Estimation of expected environmental impact of recycling process vs. conventional process
- Estimation of socio-economic impacts due to the adaptation of recycling system in printing industry vs. conventional systems

### Methodologies



- ❖ PQE (Product Quality Evaluation), WRE (Waste Reduction Evaluation), PRE (Pollutants Reduction Evaluation)
- ❖ DEE (Direct economic effects), IEE (Indirect economic effects), IBI (Induced business impacts), DYEE (Dynamic economic effects)
- ❖ LI (Lifestyle impacts), CUI (Cultural impacts), COI (Community impacts), A/QLHI (Amenity/Quality of life & health impacts), CSR (corporate social responsibility)

### Final Deliverables

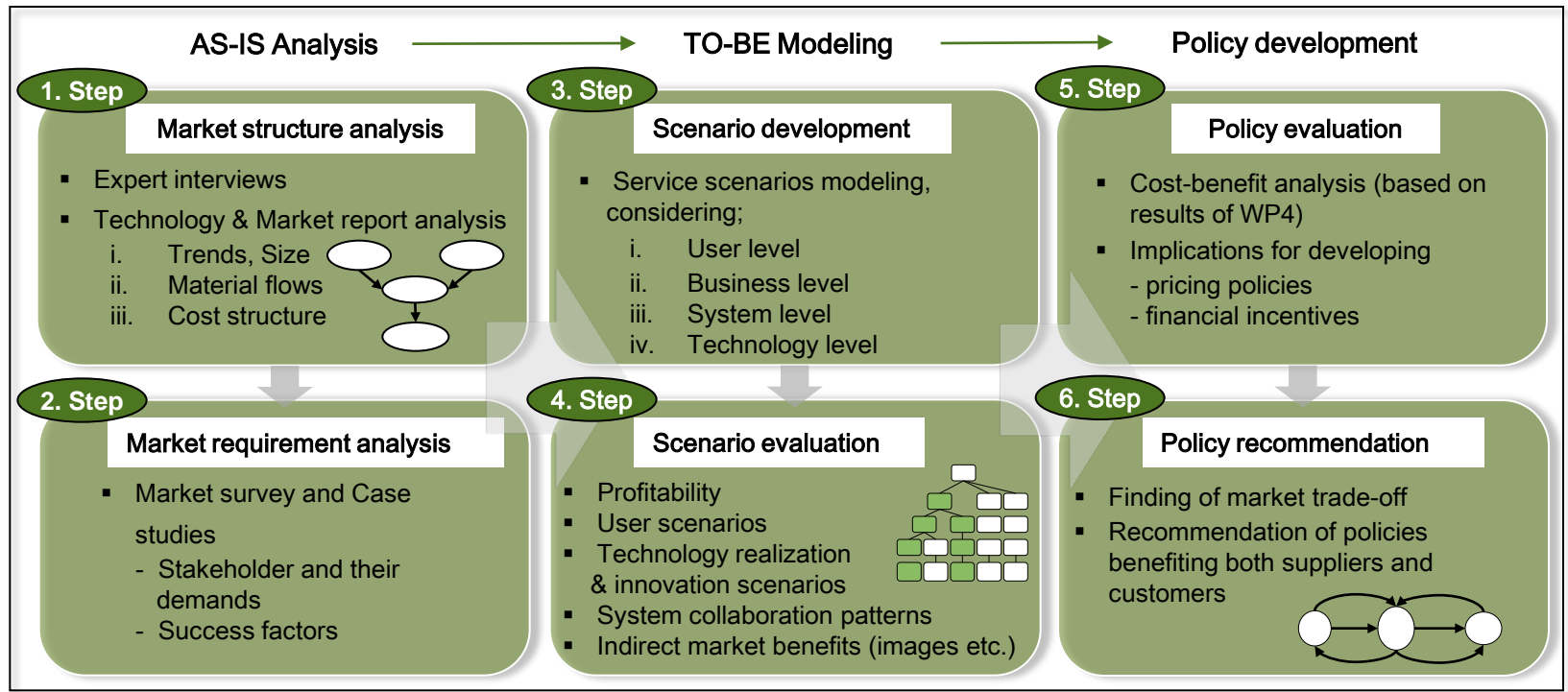
- Developed Tool & Methodologies for EIA and SEIA
- Identified modifying demands of technological and infrastructural aspects for the sustainable adaptation of Recycling Process in printing industry

## Development of Sustainable Business Model & Recommendation of Supporting Policy

### Contents

- Identification of As-Is business model & stakeholders of current conventional waste ink treatment systems
- Development of To-Be model employing advanced recycling system
- Recommendation of supporting policies to enhance applicability of advanced recycling process in printing industry

### Methodologies



### Final Deliverables

- Economically and socially feasible market mechanism for waste ink recycling business in EU
- Suitable communication strategy involving up- and downstream supply chain partners
- Tax Relief & Subsidy Systems for supporting Recycling Process Adaptation in printing industry

## Strategy & Structure

Strategy

- I. Enhancing applicability potential of advanced recycling technology through the international collaboration among Spain (UA), Germany (Kist-Europe), and Switzerland (EPFL)
- II. Demonstration of recycling process in printing industry through advisory partnership from stakeholders in printing industry in SPAIN
- III. Drawing practically applicable results through industrial collaboration in EU

Structure

