2018

Co-design processes for cleaning and facilities services system
Germak, Claudio and Giuliano, Luca and Abbate, Lorenza

Suggested citation:

Co-design processes for cleaning and facilities services system

Claudio Germak, Luca Giuliano, Lorenza Abbate
PROFESSIONAL CLEANING IN ITALY

CLEANING CHAIN | production > distribution > service

40,000 clean firm in Italy
240,615 Employees
11 Bilions Market size
40% Public contract
60% Private contract

Claudio Germak, Luca Giuliano, Lorenza Abbate
Polytechnic University of Turin
ASSETS

- certifications (EPD, Ecolabel UE, CAM)
- washing method (pre-impregnated mop)
- use (waste, errors, incorrect use)
- chain
- performance, efficiency (weight, maneuverability, accessibility of the instruments, etc.)
- usability (actors' requirements)
- washing method (pre-impregnated mop)
- control (hygienic output, cleaning of environments, etc.)
- performance, efficiency (raw materials, sterilization, washability, etc.)
- manageability
- human capital
- sustainability (weight, maneuverability, accessibility of the instruments, etc.)
- ergonomics
- hygiene (raw materials, sterilization, washability, etc.)
- speed
- processes
- products

Claudio Germak, Luca Giuliano, Lorenza Abbate
Polytechnic University of Turin
CLEANING OFFER STATE OF THE ART

SERVICES | cleaning > furniture > wellfare (management and training)

ENVIRONMENTS:

- hospitals
- schools
- industries
- malls
STATE OF THE ART SUGGESTIONS

SMART PRODUCTION

“... new production technologies shared by production-related actors that foster collaboration between people, machines and systems.”

SMART SERVICES

“a new generation of information and technical infrastructures that helps manage and monitor systems, exploiting the logic of maximum integration between all the actors of the production chain, including customers”

SMART DEVICES

“...interactive electronic gadgets that understand commands sent by users and help in daily activities. They are defined by their ability to connect to a network to share and interact remotely”

involve

 USERS

Claudio Germak, Luca Giuliano, Lorenza Abbate
Polytechnic University of Turin
SOCIAL INCLUSION
The act of making all groups of people within a society feel valued and important.

PARTECIPATORY ECONOMICS
The underlying values that PE implement are equity, solidarity, diversity, workers' self-management and efficiency (defined as accomplishing goals without wasting valued assets).

Claudio Germak, Luca Giuliano, Lorenza Abbate
Polytechnic University of Turin
USING HCD AND CODESIGN STRATEGY FOR:

> Identify the virtuous relationships among actors, processes and tools
> Implement them systematically in the supply chain of cleaning activities.
> Identify needs
> Build a creative environment

Claudio Germak, Luca Giuliano, Lorenza Abbate

Polytechnic University of Turin
UX TEST

HOW
ethnographic questions

WHO
10 highly skilled users

WHERE
Mirafiori city of design

TOOLS
Mops

Claudio Germak, Luca Giuliano, Lorenza Abbate
Polytechnic University of Turin
DESIGN INSIGHT

> movements and fatigue factors
> social aggregation
> linguistic gap
> communication and management (towards users and firm)
Claudio Germak, Luca Giuliano, Lorenza Abbate
Polytechnic University of Turin
DESIGN CONCEPT

- Automated and interconnected production models;
- Intelligent and communicating products;
- Traceability of processes that fosters collective information;
- Shared and collaborative production model at the supply chain level;
- Cloud storage of a significant amount of collected data and their accessibility.

Claudio Germak, Luca Giuliano, Lorenza Abbate
Polytechnic University of Turin
DESIGN CONCEPT

Claudio Germak, Luca Giuliano, Lorenza Abbate

Polytechnic University of Turin
aula n.O8
STANZE
sei soddisfatto?
il cestino non viene svuotato da giorni
VMƙYXM
aula n.O8
STANZE
feedback
aula n.O8
STANZE
presa corrente
presa a lato della scrivania rotta, da verificare in tempi brevi
aula n.O8
STANZE
presa di corrente
aula n.O8
STANZE
guanti
il paio che avevo si sono rotti di nuovo, meglio comprarne di un'altra marca
aula n.O8
STANZE
FORNITURE
guanti
panni
prima di correda
prima del bed in una camera, da verificare al tempo libero
aula n.O8
STANZE
FORNITURE
guanti