



***IMPACTS OF DIGITALIZATION ON
EMPLOYMENT, WORK ORGANIZATION AND
PROFESSIONAL FIGURES
IN SPANISH CASES***



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METODOLOGY AND CHARACTERISTICS

3 Case studies

Multinational company
Engineering, Civil work, renewable energy, services
20 th. workers & 40 countries

Medium regional company
Residential buildings
100 workers

Big national company
Residential buildings, renewable energy, services
1.5 th. workers

12 Interviews

Employers
Trade Union rep.
Work Council rep.
Employees

CHARACTERISTICS

| INNOVATIONS | Case A | Case B | Case C |
|-----------------------------------|--------|--------------------|--------|
| BIM | x | x | x |
| Digitalization | x | x | x |
| APPs on-site | x | x | x |
| Software /Digital tool management | x | x | x |
| Prefabrication (Off-site) | | (external company) | x |
| Industrialization | | | x |



IMPACTS ON WORK ORGANIZATION

Processes and tasks

- More impacts in offices than on-sites
- Increase of timing in initial phases, reduced timing in others
- Not in all Projects / Depending on the requirements of the contracts
- Reorganization of their productive processes (phases)

Relationship with subcontractors

- Reorganization of their value chains (companies)
- Difficulties to involve suppliers / subcontractors in the first steps

Coordination among departments and workers

- Cultural change (top + front line)
- Varied innovation management (Innovation Department / CEO / PMO)
- Standardization of tasks / flexibilization of tasks
- Better coordination (departments – workers – information)

ALL DEPARTMENTS ARE AFFECTED

Offices

- Projects and designing
- Purchases / sales - Marketing
- HHRR / Finance / legal departments

On-site

- Production
- Outsourcing
- Pre / Post-sales (small damages)
- Services (Maintenance / facility services)

IMPACTS ON EMPLOYMENT

Job creation

- First steps: Hiring New profiles (BIM)
- Industrialization: New figures

Job transformation

- Internal training
- Learning by doing

Job reduction

- Short time work schemes linked to COVID-19



WORKING CONDITIONS AFFECTED

Offices

- More / Less autonomy
- Punctual overloads
- Surveillance and control (right to disconnect)
- Better working conditions (remote work)
- Flexibility of working time
- More cooperation / information about the whole process

On-site

- More autonomy
- Better managing of workloads (Paperless)
- Flexibility
- Surveillance and control (automatic reporting)
- Better working conditions (safety / Health)
- More information about the whole process
- “Outsourcing” of the costs

NEW FIGURES

Offices

- At the beginning: BIM Manager, specialist, ...
- Later: Internal training and learning by doing
- More women presence

On-site

- New figures: i.e. dry plasterers (drywalls) and assemblers Vs Bricklayers
- Internal training and learning by doing

Off-site

- New figures related to industrialization (Managers and blue collars -Crafts-)
- Hiring and outsourcing



FINAL REMARKS: DRIVERS & OBSTACLES

Resistance to changes

Size of company

Cost of investment

Suppliers and subcontractors

Long term process



RISKS



New role of Social Dialogue





Thanks for your attention

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