

REPORT IMPRESSION European Electrical Installation Monitor Q3-2023 Theme topic: BIM Nov-2023





Index

About European Electrical Installation Monitor

Key takeaways

Business development

Theme topic – Building information modeling

Cross country summary

BIM usage on European leve

United Kingdon

Sermany

France

Polanc

Belgium

The Netherlands

Spain

Appendix

About European Electrical Installation Monitor

THE GOAL

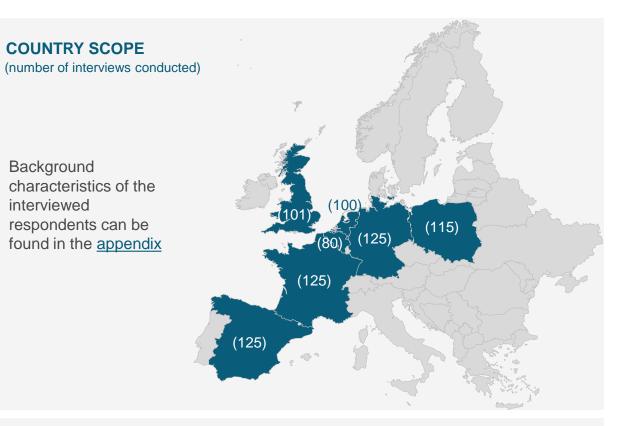
To check and track the behaviour and trends in the European electrical installation market. This is done 4 times per year, by means of phone interviews with registered electrical installation companies, divided over 7 major European markets.

THE RESEARCH TOPICS

Fixed part: Economic developments of the installation companies in Europe (order book and turnover development)

Quarterly theme topics in 2023:

Q1: Media orientation Q2: Training needs Q3: BIM Q4: Purchase channels



THE TIMELINE



PROJECT TEAM



Maja Markovic Project Manager +31 682834333 m.markovic@usp-mc.nl

Valentino Vlahovic Senior Research Analyst

vlahovic@usp-mc.nl

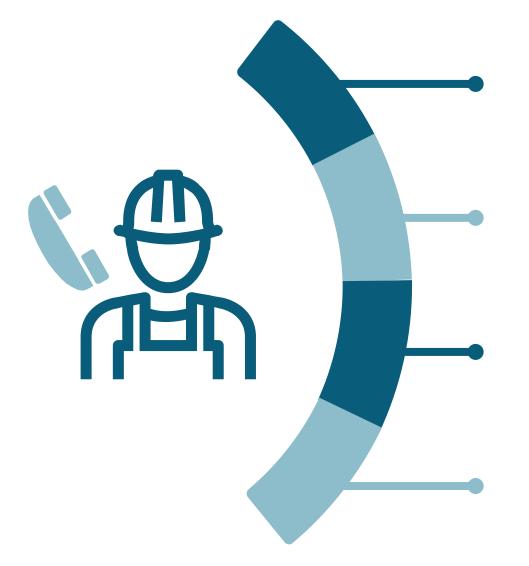


Dirk Hoogenboom Research consultant

+31 652098924 hoogenboom@usp-mc.nl



About target group & methodology



Surveying electrical installation companies...

Interviewed companies need to provide electrical installation services, but they may also do other activities in addition (HVAC, plumbing, etc.). Most interviews are conducted with owners/ directors or purchasers of these companies.

... selected from a country-representative database

USP possesses an international database of electrical installation companies, which is constantly updated. Respondents are thus not part of a fixed panel; the sample varies from wave to wave.

... through phone interviews, by native-speaking agents

Phone surveys are the best approach for obtaining a sufficient sample, in order to provide insights that can be relied on. These phone calls are made by fixed fieldwork partners, located in the respective countries.

... weighting the results based on company size groups

Country results are weighted so that all three company size groups* have an equal influence on the total. As typically most interviews are conducted with small companies, we believe it is important to correct in order for big companies to have an equal impact on the 'total' results. This way the results are not heavily influenced by many smaller companies.

About the Q3 theme topic



Surveying the BIM topic...

Installation systems become more and more complex, different types of installation systems are often connected with each other and installers need to have knowledge about a broad range of installation systems. Besides that, on large scale building projects, installers need to work with several other parties who are involved in the building process. This makes clear communication and close cooperation essential. Building Information Modelling (BIM) is a concept that helps in this and is steadily gaining ground in (especially large and complex) building projects.

...allows for better insights in the awareness and usage of BIM and how installers can be supported on this area

To provide insights in this, we looked at this topic from various angles and mapped out:

- The familiarity with and (potential) usage of BIM;
- For which products/ application areas BIM is used;
- Reasons for not using BIM (yet);
- The relevance of several BIM features for installation companies;
- · Perceived advantages and limitations of BIM;
- Installers' expectations towards manufacturers regarding BIM.



Index

About European Electrical Installation Monitor

Key takeaways

Business development

Theme topic – Building information modeling

Cross country summary

BIM usage on European leve

United Kingdon

Germany

France

Polanc

Belgium

The Netherlands

Spain

Appendix

Key takeaways

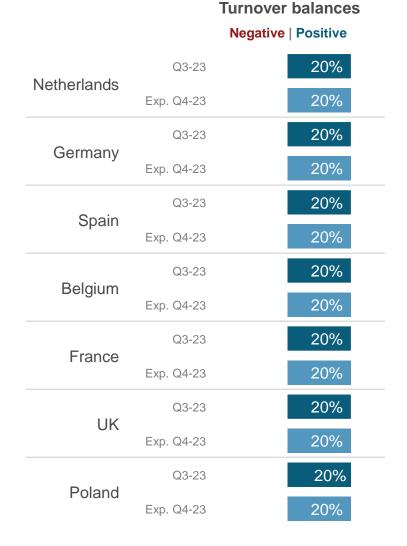
DUMMY DATA

Business Development

Important: All quantitative data in this report was obtained during governmental COVID-19related restrictions in the respective countries.

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa.

- Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa.
- Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa.



USP

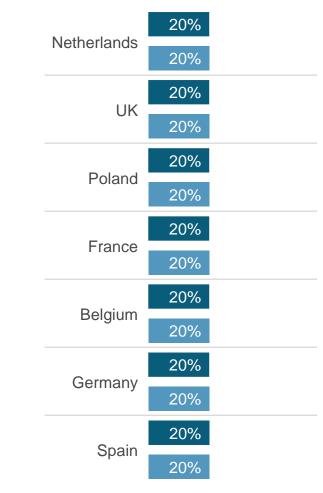
Key takeaways

BIM

DUMMY DATA

BIM penetration

Aware of BIM | Using BIM



2

Lorem ipsum dolor sit amet, consectetuer adipiscing elit.

- Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa.
- Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa.
- Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa.

Lorem ipsum dolor sit amet, consectetuer adipiscing elit.

- Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa.
- Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa.
- Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa.



Index

About European Electrical Installation Monitor

Key takeaways

Business development

Theme topic – Building information modeling

Cross country summary

BIM usage on European leve

United Kingdon

Sermany

France

Polanc

Belgium

The Netherlands

Spain

Appendix

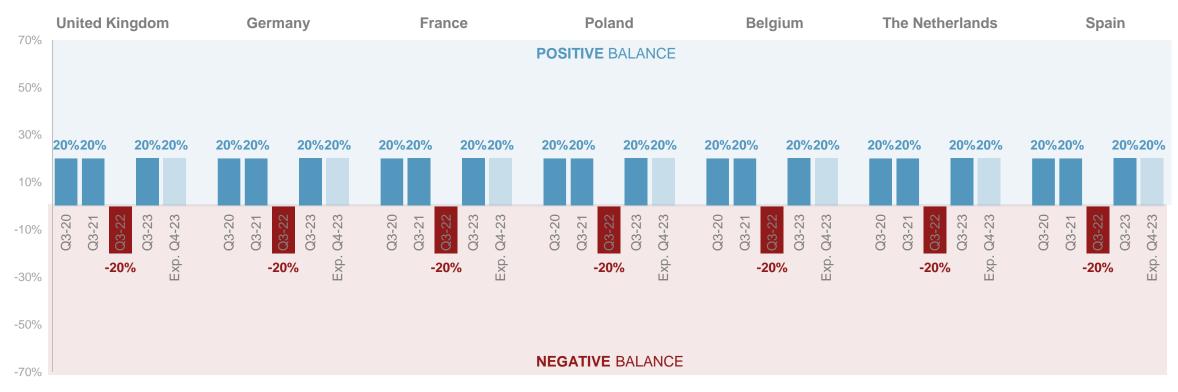
USP

Lorem ipsum dolor sit amet, consectetuer adipiscing elit.

DUMMY DATA

Turnover balance

Q: If you compare your turnover of Q3-21 to the same quarter last year, how did your turnover develop? (% INCREASE minus % DECREASE)



Important: The 2020 and 2021 data was obtained while governmental COVID-19-related restrictions were in effect in the respective countries.





Important: The 2020 and 2021 data was obtained while governmental COVID-19-related restrictions were in effect in the respective countries.

Turnover balance

Q: If you compare your turnover of Q3-21 to the same quarter last year, how did your turnover develop? What are your expectations for the development in Q4-21?

TURNOVER BALANCE = % INCREASE minus % DECREASE)

COMPARISON SAME QUARTER LAST YEAR

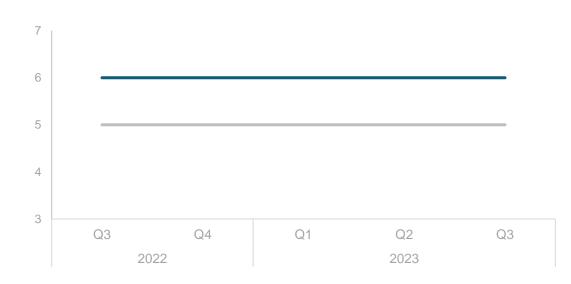


Detailed information regarding the turnover distribution can be found in the <u>appendix</u>.

Order book portfolio

Q: How big is your current order book portfolio?

ORDER BOOK (MONTHS) EU | THE UNITED KINGDOM





Index

About European Electrical Installation Monitor

Key takeaways

Business development

Theme topic – Building information modeling

Cross country summary

BIM usage on European leve

United Kingdon

Sermany

France

Polanc

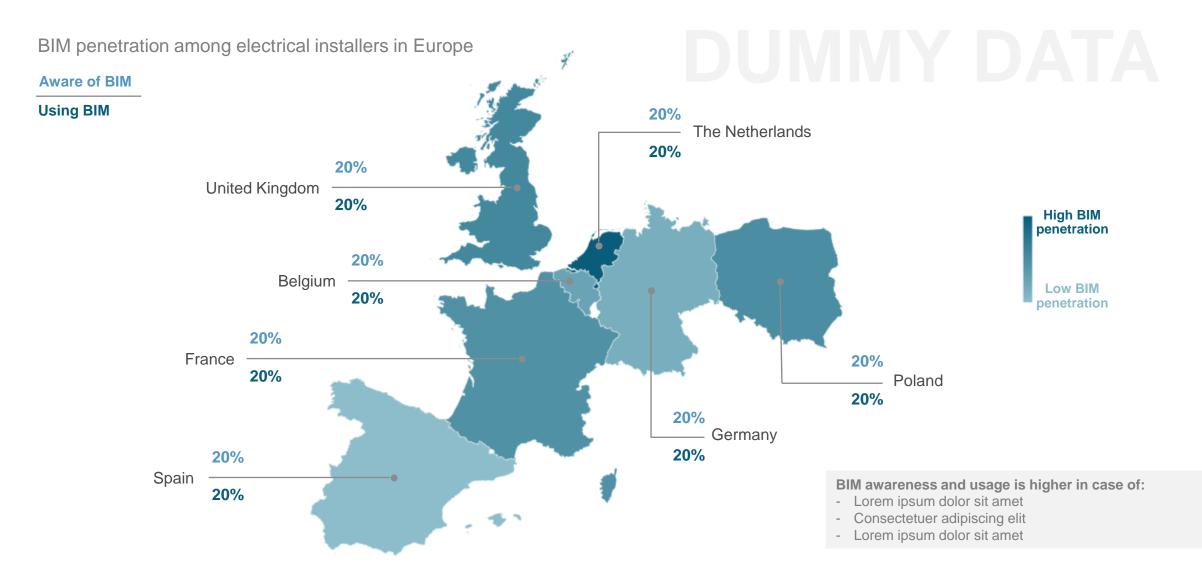
Belgium

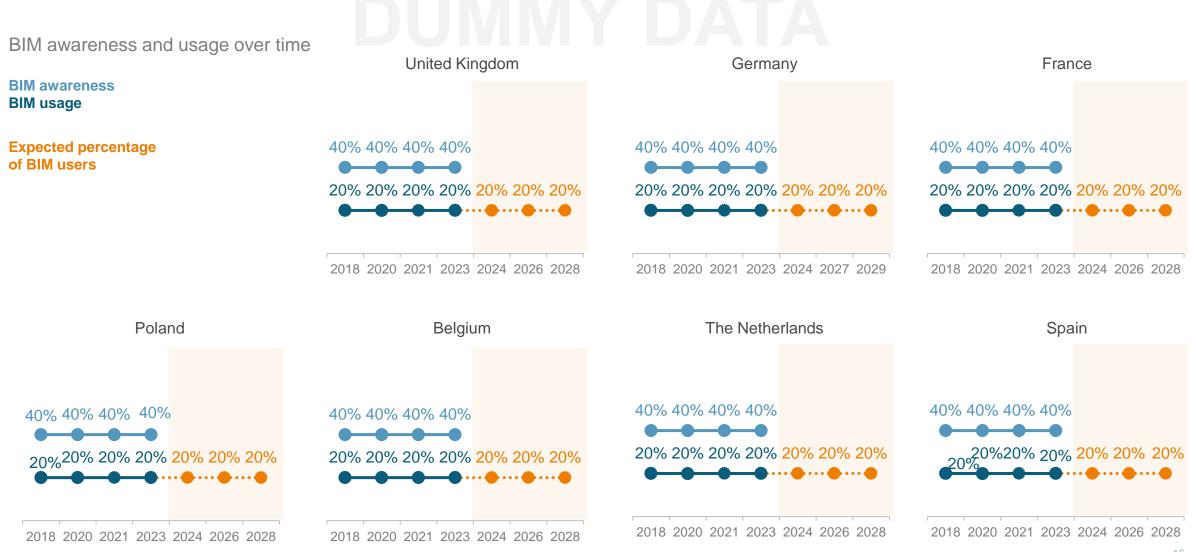
The Netherlands

Spain

Appendix

- In the theme part of Q3 2023, special attention is paid to **<u>BIM</u>**.
- Installation systems become more and more complex, different types of installation systems are often connected with each other and installers need to have knowledge about a broad range of installation systems. Besides that, on large scale building projects, installers need to work with several other parties who are involved in the building process. This makes clear communication and close cooperation essential. Building Information Modelling (BIM) is a concept that helps in this and is steadily gaining ground in (especially large and complex) building projects.
- This chapter will give insight into installers' awareness, experiences and visions regarding BIM.
- The following topics will be discussed in this chapter:
 - o The familiarity with and (potential) usage of BIM;
 - For which products/ application areas BIM is used;
 - Reasons for not using BIM (yet);
 - The relevance of several BIM features for installation companies;
 - Perceived advantages and limitations of BIM;
 - o Installers' expectations towards manufacturers regarding BIM.
- After this introduction, a cross-country summary will be given, comparing the countries next to each other on the main findings of the BIM topic. The chapter after that, will give insights into the usage of BIM on a European level; i.e. the results of the seven countries combined on a total level. The results on this total level are weighted by the number of installation companies within a country. After that, the results per country will be elaborated on a more detailed level.







Index

About European Electrical Installation Monitor

Key takeaways

Business development

Theme topic – Building information modeling

Cross country summary

BIM usage on European level

United Kingdom

Germany

France

Polano

Belgium

The Netherlands

Spain

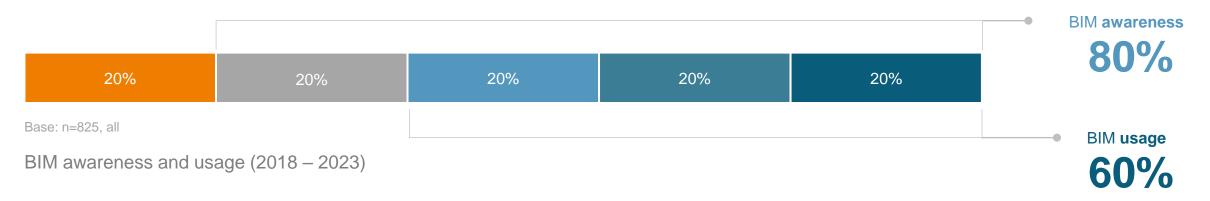
Appendix

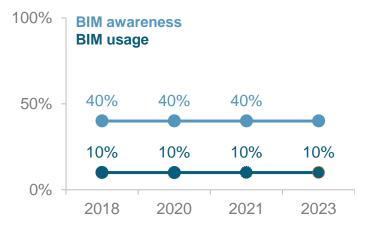


Familiarity with BIM

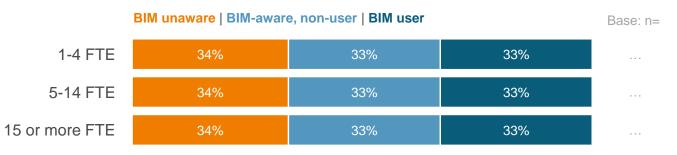
Q: Are you familiar with BIM, and if so, how?

Not heard of it | Heard of it, but not seen it yet | Already one project done in BIM | Work on increasingly more BIM projects | All projects are done in BIM





Familiarity with BIM – by FTE



Reasons for not working with BIM (yet) Q: Why is your organization not (yet) started with using BIM?

BIM offers no benefits for my organization	20%
Commercial/ private clients don't ask for BIM	20%
Not considered it yet	20%
Small company	20%
The investments are too big	20%
Not needed for our type of work/ projects	20%
Projects are too small	20%
Public clients don't ask for BIM	20%
The parties in the building chain are not ready yet	20%
It takes time	20%

Lorem ipsum dolor sit amet, consectetuer adipiscing elit.

Lorem ipsum dolor sit amet, consectetuer adipiscing elit.

Base: n=..., if familiar with BIM, but not working with BIM (yet)

USP

Lorem ipsum dolor sit amet, consectetuer adipiscing elit.

Companies having BIM software Q: Does your company have BIM software?

20% of the companies that work with BIM, have BIM software

Base: n=..., if using BIM

Used BIM software

Q: What BIM software platform do you/ your company use?



Base: n=..., if having BIM software



Share of turnover coming from BIM projects

Q: What percentage of your turnover/ revenue comes from projects in which BIM is implemented?

20% of the turnover BIM users get from BIM projects

Base: n=..., if worked on multiple BIM projects.

BIM application

Q: For which electrical products/ application areas do you use BIM?

Cables and wiring	40%	•	
Lighting and luminaries	40%	•	Lorem ipsum dolor sit
Switches / Sockets outlets	40%		amet, consectetuer adipiscing elit.
Electrical enclosures	40%		I
Electrical conduit systems	40%		
Fire alarm systems	40%		
Home automation systems / Smart homes	40%		Lorem ipsum dolor sit amet, consectetuer adipiscing elit.
Access control	40%		1 0
Photovoltaics	40%		
Everything/ the whole picture	40%		
Electrical heating	40%		
Other	40%		
Don't know	40%		

Expectations towards manufactures in relaction of electric constraints and the manufacturers of electric constraints and the manufacturers of electric constraints and the manufacturers of electric constraints and the manufacture of electric c	
Support/ training	20%
To provide technical product information/ specifications for BIM	20%
To provide 3D BIM object information for their assortment / BIM files	20%
To make their BIM product information available in open source libraries	20%
To be able to engineer in BIM	20%
To provide BIM information in IFC format	20%
Compatibility between systems/ software/ files etc.	20%
Nothing/ no expectations	20%
Other	20%
Don't know	20%

Lorem ipsum dolor sit amet, consectetuer adipiscing elit.

BIM usage on European level: BIM awareness & usage | BIM application | Searching & exchanging information | Attitudes towards BIM

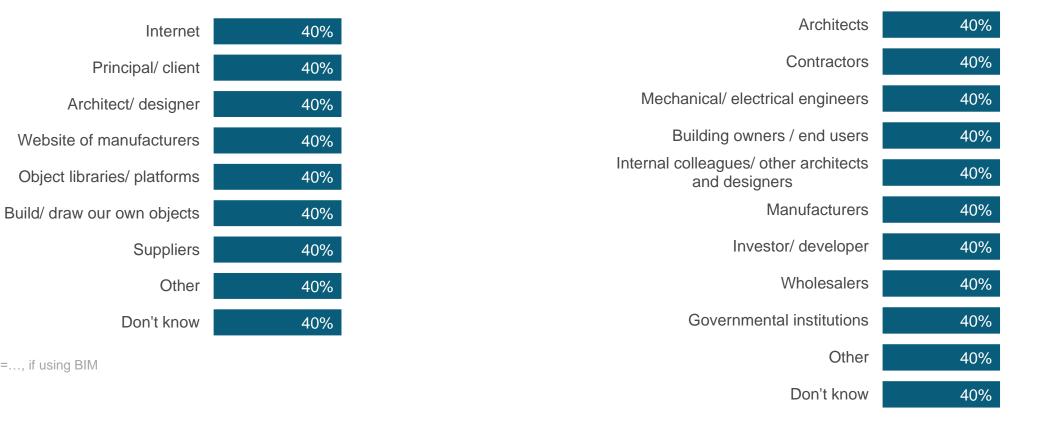
Lorem ipsum dolor sit amet, consectetuer adipiscing elit.

Main source of information

Q: Where do you mainly get the BIM information/ objects from?

Main stakeholders

Q: With which stakeholders do you exchange data regularly?



Base: n=..., if using BIM

BIM usage on European level: BIM awareness & usage | BIM application | Searching & exchanging information | Attitudes towards BIM

Lorem ipsum dolor sit amet, consectetuer adipiscing elit.



Attitudes towards BIM - BIM users

Q: To what extent do you agree or disagree with the following statements?

The execution of the project 20% 20% 20% 10% meets initial planning better when designed in BIM Failure costs are lower 20% 20% 20% 10% in projects designed in BIM than in projects that are not Compared to the projects not designed in BIM, 20% 20% 20% 10% costs of BIM designed projects are more in line with the initial budget

Base: n=..., if using BIM

(Strongly) agree | Neither agree nor disagree | (Strongly) disagree | Don't know

Failure costs savings due to BIM usage

Q: Can you give a rough estimation how much percent the failure costs are lower, when projects are designed in BIM?

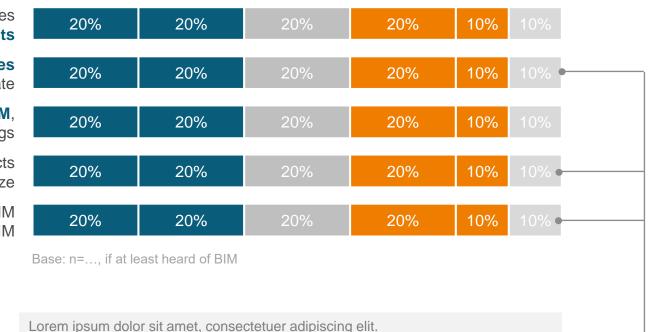
The failure costs are approximately lower when projects are designed in BIM



Attitudes towards BIM – users and non-users

Q: To what extent do you agree or disagree with the following statements?





BIM is relevant **only** for installation companies working on **big projects**

BIM will lead to major changes in the way the different market teams collaborate

Installers **do not need to work in BIM**, as they just have to install products according to the drawings

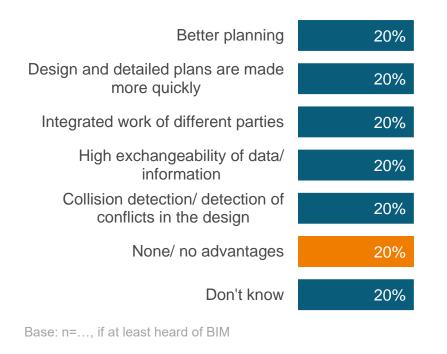
BIM is relevant for all manufacturers of electrical products regardless of their size

We have **enough knowledge** about BIM and our role in BIM

BIM usage on European level: BIM awareness & usage | BIM application | Searching & exchanging information | Attitudes towards BIM

Lorem ipsum dolor sit amet, consectetuer adipiscing elit.

Perceived advantages of BIM Q: What do you consider the greatest advantages of BIM?



Lorem ipsum dolor sit amet, consectetuer adipiscing elit.

Perceived limitations of BIM Q: What do you consider the greatest limitations of BIM?



Base: n=..., if at least heard of BIM

Lorem ipsum dolor sit amet, consectetuer adipiscing elit.



Index

About European Electrical Installation Monitor

Key takeaways

Business development

Theme topic – Building information modeling

Cross country summary

BIM usage on European level

United Kingdom

Germany

France

Polanc

Belgium

The Netherlands

Spain

Appendix

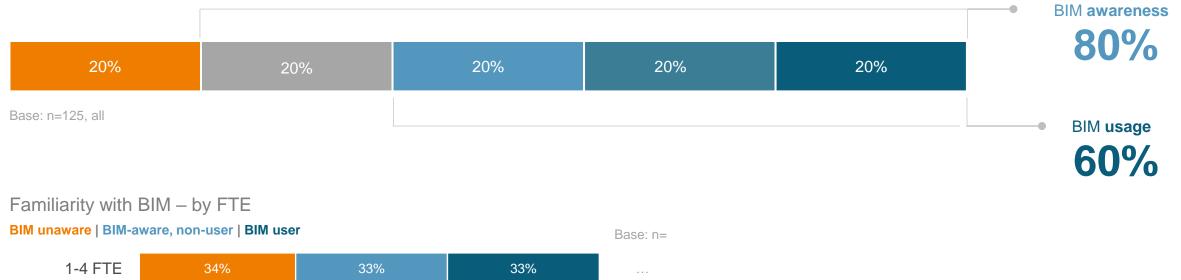




Familiarity with BIM

Q: Are you familiar with BIM, and if so, how?

Not heard of it | Heard of it, but not seen it yet | Already one project done in BIM | Work on increasingly more BIM projects | All projects are done in BIM

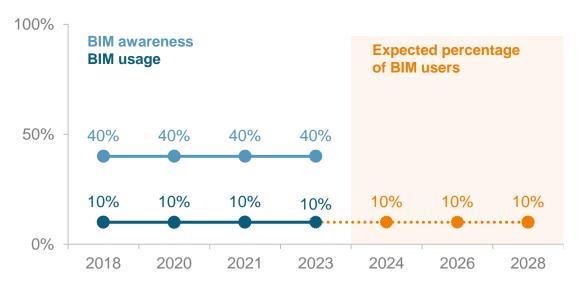




28



BIM awareness and usage over time



Expectations BIM usage

Q: How long do you think it will take for BIM to be widely used by installation companies, so more than 30% of the projects to be designed with BIM?

UK installers think that **BIM** will be **widely used** by installation companies in **2.0 years**

Base: n=..., if at least heard of BIM



Reasons for not working with BIM

Q: Why is your organization not (yet) started with using BIM?

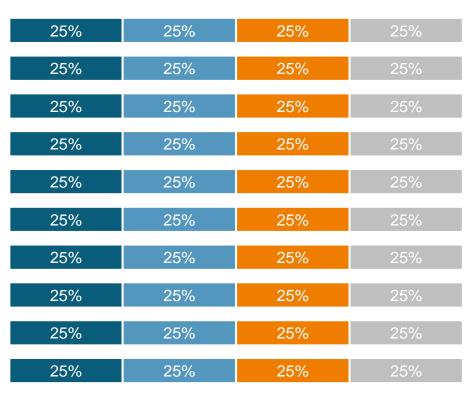
BIM offers no benefits for my organization	40%
Commercial/ private clients don't ask for BIM	40%
Projects are too small	40%
The investments are too big	40%
Small company	40%
It takes time	40%
Public clients don't ask for BIM	40%
They have not considered it yet	40%
Use other software	40%
Other	40%

Base: n=..., if heard of BIM, but not working with BIM



Relevance of BIM features

Q: Which of the following features of BIM do you think are most relevant for a company like yours?



Determining quantities of materials, equipment, and man-hours Collision detection between the imported electrical system elements and the architectural project elements

Generate/Work with 2D drawings of the installation system coming from the 3D model

Extra analysis and simulation capabilities for energy performance

Extra analysis and simulation capabilities for fire safety

To make 3D visualisation and animation of the installation systems

Exchange of structured product information via a Common Data Environment

4D, coupling/ linkage with the planning

Extra analysis and simulation capabilities for sustainability

5D, coupling/ linkage with the costs

Base: n=..., if at least heard of BIM

Very relevant | Somewhat relevant | Not relevant | Don't know

Advantages of BIM

Q: What do you consider the greatest advantages of BIM?

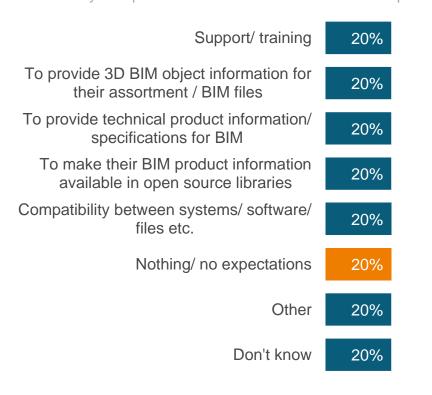
Collision detection/ detection of conflicts in the design	20%
Better planning	20%
Integrated work of different parties	20%
Easier to convince a client of design	20%
High exchangeability of data/ information	20%
Designs are better thought out	20%
Easier and better cost calculations & purchases	20%
Error-free designs	20%
Design and detailed plans are made more quickly	20%
Quicker lead time of projects	20%
Reduced calculation time	20%
More visualisation	20%
Error-free installation	20%
None/ no advantages	20%
Other	20%
Don't know	20%

Limitations of BIM

Q: What do you consider the greatest limitations of BIM?

Requires financial investment	20%
Requires training/ gaining knowledge	20%
Too complex	20%
The full potential of BIM is not clear to us	20%
Difficult to understand, not clear what BIM is	20%
Software (access) problems	20%
It takes time to (learn to) work with it	20%
BIM requires a cultural change in the industry	20%
Lack of well-defined data exchange requirement	20%
Only beneficial if all parties (can) work with it	20%
None/ no limitations	20%
Other	20%
Don't know	20%

Expectations towards manufactures in relation to BIM Q: What do you expect from the manufacturers of electrical products regarding BIM?



Stop working with manufacturers if not BIM-ready Q: Could you imagine that you would stop working with certain manufacturers, because they are not BIM-ready?

Yes | Maybe | No | Don't know



Base: n= ..., if at least heard of BIM



Attitudes towards BIM

Q: To what extent do you agree or disagree with the following statements?

20%	20%	20%	20%	10% 10%
20%	20%	20%	20%	10% 10%
20%	20%	20%	20%	10% 10%
20%	20%	20%	20%	10% 10%
20%	20%	20%	20%	10% 10%

BIM is relevant only for installation companies working on big projects

Installers **do not need to work in BIM**, as they just have to install products according to the drawings

BIM will lead to major changes in the way the different market teams collaborate

We have enough knowledge about BIM and our role in BIM

BIM is relevant for all manufacturers of electrical products regardless of their size

Base: n= ..., if at least heard of BIM

(Strongly) agree | Neither agree nor disagree | (Strongly) disagree | Don't know



Index

About European Electrical Installation Monitor

Key takeaways

Business development

Theme topic – Building information modeling

Cross country summary

BIM usage on European leve

United Kingdon

Germany

France

Polanc

Belgium

The Netherlands

Spain

Appendix

Respondents' background characteristics

Job title of the interviewed respondents and the company size

Q: What is your position within the company?

Q: Yourself included, how many fulltime employees does your company have in total, in all branches?



50%

50%

50%

15+ FTE

50%

50%

DUMMY DATA

50%

50%



Questionnaire – theme questions

- Are you familiar with BIM, and if so, how?
- Does your company have BIM software?
- What BIM software platform do you/ your company use?
- What percentage of your turnover/ revenue comes from projects in which BIM is implemented?
- Why is your organization not (yet) started with using BIM?
- Does your company have any plans to start working with BIM?
- How long do you think it will take for BIM to be widely used by installation companies, so more than 30% of the projects to be designed with BIM?
- For which electrical products/ application areas do you use BIM?
- Where do you mainly get the BIM information/ objects from?
- With which stakeholders do you exchange data regularly?

Questionnaire – theme questions

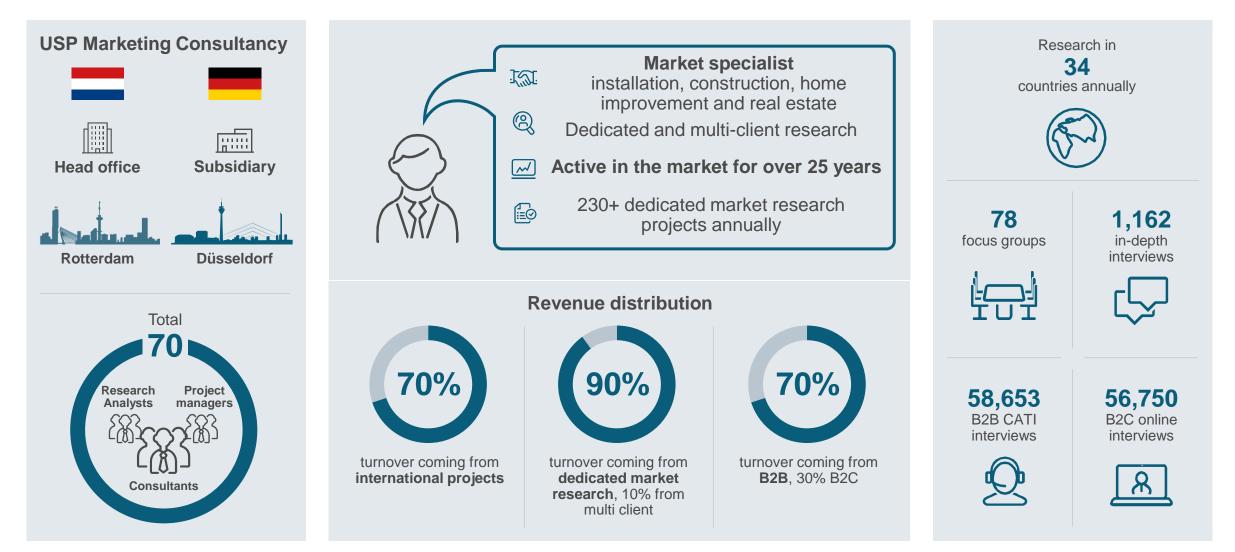
- Which of the following features of BIM do you think are most relevant for a company like yours?
 - Generate/ Work with 2D drawings of the installation system coming from the 3D model
 - To make 3D visualisation and animation of the installation systems
 - Determining quantities of materials, equipment, and man-hours
 - · Collision detection between the imported electrical system elements and the architectural project elements
 - 4D, coupling/ linkage with the planning
 - 5D, coupling/ linkage with the costs
 - Extra analysis and simulation capabilities for energy performance
 - Extra analysis and simulation capabilities for fire safety
 - Extra analysis and simulation capabilities for sustainability
 - Exchange of structured product information via a Common Data Environment
- What do you consider the greatest advantages of BIM?
- What do you consider the greatest limitations of BIM?
- What do you expect from the manufacturers of electrical products regarding BIM?
- Could you imagine that you would stop working with certain manufacturers, because they are not BIM-ready?



Questionnaire – theme questions

- To what extent do you agree or disagree with the following statements?
 - Installers do not need to work in BIM, as they just have to install products according to the drawings
 - BIM will lead to major changes in the way the different market teams collaborate
 - BIM is relevant only for installation companies working on big projects
 - BIM is relevant for all manufacturers of electrical products regardless of their size
 - We have enough knowledge about BIM and our role in BIM
 - Failure costs are lower in projects designed in BIM than in projects that are not
 - Costs of BIM designed projects are more in line with the initial budget then projects not designed in BIM
 - The execution of the project meets initial planning better when designed in BIM
- Can you give a rough estimation how much percent the failure costs are lower, when projects are designed in BIM?

About USP



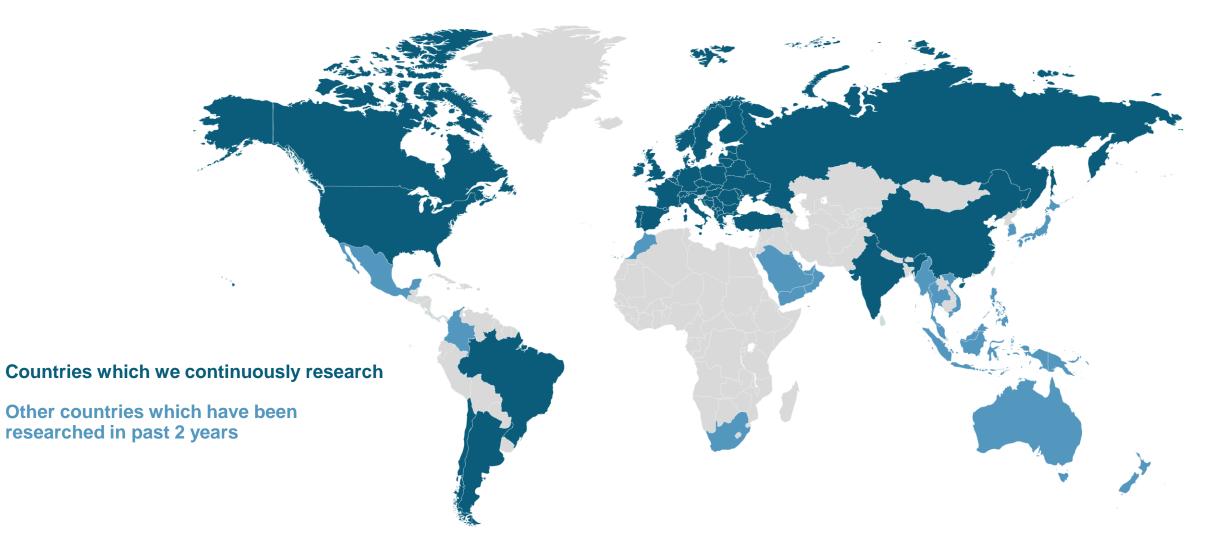
What we do



Dedicated market research

- Tailor made
- Driven by your information needs
- Advice & consultancy based on facts and over 25 years of experience in the industry
- Worldwide coverage
- B2B, B2C, qualitative and quantitive research or a combination of both
- Within our market specialism, all types of researches can be conducted
- Targeting the right audience, with the right questions at the right time.

We are active globally



Principals of USP



Our multi-client research monitors

	European Architectural Barometer	European ©ີ Contractor Monitor	European Mechanical Installation Monitor	European ݢ̣́ Electrical Installation Monitor	European Painter Insight Monitor	European Home Improvement Monitor
Target group	Architects	Building contractors	HVAC installers	Electrical installers	Professional painters	Consumers
Methodology	Q	Q	Q	<u>Q</u>	<u>\$</u>	
Annual sample size	5,800 interviews	2,050 interviews	3,200 interviews	3,800 interviews	2,300 interviews	26,400 interviews
Country scope	 Germany United Kingdom France Netherlands Belgium Poland Spain Italy 	 Germany United Kingdom France Netherlands Belgium Poland Spain Italy 	 Germany United Kingdom France Netherlands Belgium Poland 	 Germany United Kingdom France Netherlands Belgium Poland Spain 	 Germany United Kingdom France Netherlands Belgium Poland Spain Italy Denmark Sweden 	 Germany United Kingdom France Netherlands Belgium Poland Spain Italy Denmark Sweden Austria
Way of reporting	Quarterly	Bi-annually	Quarterly	Quarterly	Annually	Quarterly
2020 Theme topics	 Q1: Media orientation & consumption Q2: Shifts in building methods Q3: City of the future Q4: Circularity & sustainability 	 H1: Circularity & sustainability H2: Decision-making 	 Q1: BIM & calculation tools Q2: Prefab Q3: DMU Q4: Media orientation & consumption 	 Q1: Electrification Q2: Certification & circularity Q3: Services in installation sector Q4: Pricing 	 Trend tracking Sustainability Labour shortage Online buying Future expectations Innovation needs 	 Q1: Orientation & smart homes Q2: Purchase channels Q3: Branding (A vs. Private) Q4: DIFM vs. DIY

USP Marketing Consultancy

© 02 November 2023, USP Marketing Consultancy B.V.

The information in this publication is strictly confidential and all relevant copyrights, database rights and other (intellectual) property rights are explicitly reserved. No part of this publication may be reproduced and/or published without the prior written permission of USP Marketing Consultancy B.V.