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# The Total Economic Impact™ Of iObeya Visual Management System

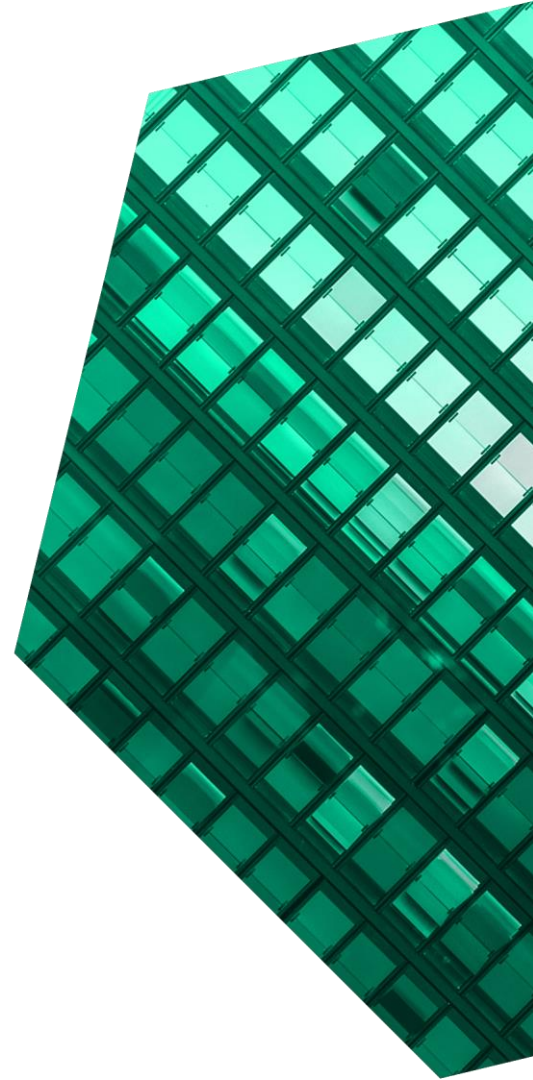
Accelerated Decision-Making And Increased Meeting  
Efficiencies Enabled By Visual Management System

DECEMBER 2022

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## ABOUT FORRESTER CONSULTING

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## Executive Summary

Large enterprises must collaborate efficiently and effectively. iObeya's Visual Management System enables remote teams to quickly and easily share complex data so that decisions and improvements can be made faster and implemented with less delay. Productivity is also greatly improved because meeting preparation and access times are reduced, and employee engagement is higher. The ability to integrate with other digital tools improves data reporting, accuracy, and access.

iObeya is a Visual Management System that enables remote collaboration on digital screens across large organizations. By making meetings more accessible and digitizing data, organizations can boost meeting efficiency and accelerate problem-solving and decision-making.

iObeya commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Visual Management System. A Visual Management System visually connects all layers of an organization, encapsulating teams, managers, and executives in a single, versatile, and sustainable human engine adapted to our volatile, uncertain, complex, and ambiguous (VUCA) world. Human culture is the basis of any organizational management system whose goal is continuous business performance, agility improvement, and resilience strengthening. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of the Visual Management System on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four decision-makers in Sanofi, a leading global pharmaceutical manufacturer which has now deployed and integrated iObeya's Visual Management System into its global lean manufacturing system, including all 90 manufacturing

### KEY STATISTICS



Return on investment (ROI)

**121%**



Net present value (NPV)

**€12.50M**

and product development sites. Forrester used this experience to project a six-year financial analysis.

Prior to using the Visual Management System, the interviewees noted how the use of whiteboards and paper-based materials for sharing information limited access to meetings. A lot of time and effort was also required to maintain the whiteboards as well as

**“When there is a manufacturing or product development issue, it’s essential to get specialists together quickly.”**

*Global head of digital and IS/IT for industrial affairs and corporate functions, Sanofi HQ*

capture important data. Integration with other digital tools was also not possible.

After the investment in the Visual Management System, Sanofi was able to make decisions and solve problems much faster, as well as benefit from improved collaboration and more efficient meetings. Additional benefits included integration with digital tools, an improved employee experience, and a reduction in Sanofi's environmental impact.

## KEY FINDINGS

**Quantified benefits.** Six-year, risk-adjusted present value (PV) quantified benefits for the composite organization include:

- **Increased speed of decision-making and problem-solving by 25%, delivering benefits of €4.5 million.** With the Visual Management System, problems or issues, particularly those impacting manufacturing and product development, can be tackled faster. All relevant employees and experts can be brought together virtually to fix an issue or quickly implement an improvement.
- **Improved collaboration and meeting efficiencies, totaling benefits of €16.5 million.** Significant productivity gains have been achieved with iObeya: meeting preparation times are reduced; data can more easily be gathered, stored, shared, and accessed; and board and room updates, such as standard improvements and template changes, can be implemented much more quickly, compared to having to update individual whiteboards.
- **Avoided €1.9 million in whiteboard and material costs.** Some costs are avoided when no longer using physical materials.

**Unquantified benefits.** Benefits that are not quantified in this study include:

- **Digital integrations, automated KPIs, and reporting.** KPI and reporting data is digitally

stored, rather than being on physical boards or images. This facilitates data analytics and historical trending and reduces errors. Digital integration also enables the use of KPI linkages, shared boards, and hyperlinks.

- **Improved employee experience.** iObeya supports remote working, enabling more flexibility for employees. Increased transparency, efficiency, and collaboration means employees are more engaged, which contributes to better talent acquisition and retention, reduced absenteeism, digital development opportunities, and higher discretionary effort. Employee connection and engagement is also enhanced using shared iObeya boards for sitewide daily communication.
- **Lean program maturity and scalability.** As a lean management tool, iObeya adds to the lean program, with benefits such as the ability to conduct remote Gemba visits and coaching, improve best practice exchange, create better standardization, easily and quickly adjust meeting instances, improve meeting management, and adapt to organizational changes.
- **Reduced travel costs.** In some use cases, iObeya replaces the need for in-person meetings, resulting in travel-related cost savings, including commuting and business travel.
- **Reduced environmental impact.** iObeya contributes to Sanofi's environmental impact by reducing travel and the demand for paper-based materials.

**Costs.** Six-year, risk-adjusted PV costs include:

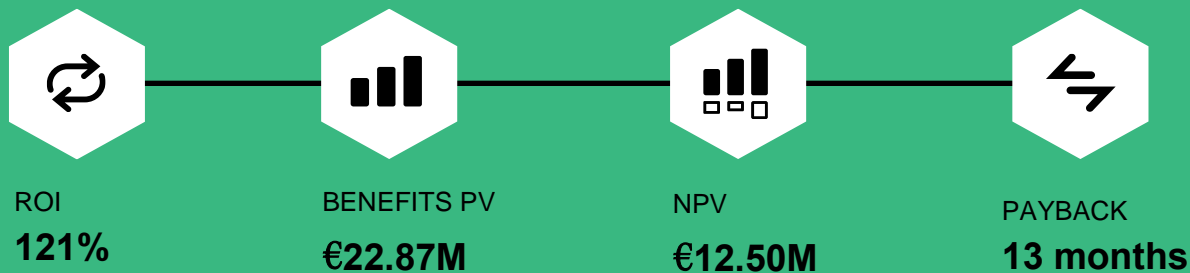
- **License and services fees total €3.2 million.** This is based on the number of iObeya rooms.
- **Training time totals €1.4 million.** New users, room administrators, and system owners need to invest time to become familiar with the system and upgrades.

- **Implementation and setup costs total €1.9 million.** This includes planning time, screen hardware, installation costs, and time to set up the system for new rooms and teams including network infrastructure.
- **Ongoing costs of €4.0 million.** This includes time for system and network maintenance and governance as well as software upgrades and fixes.

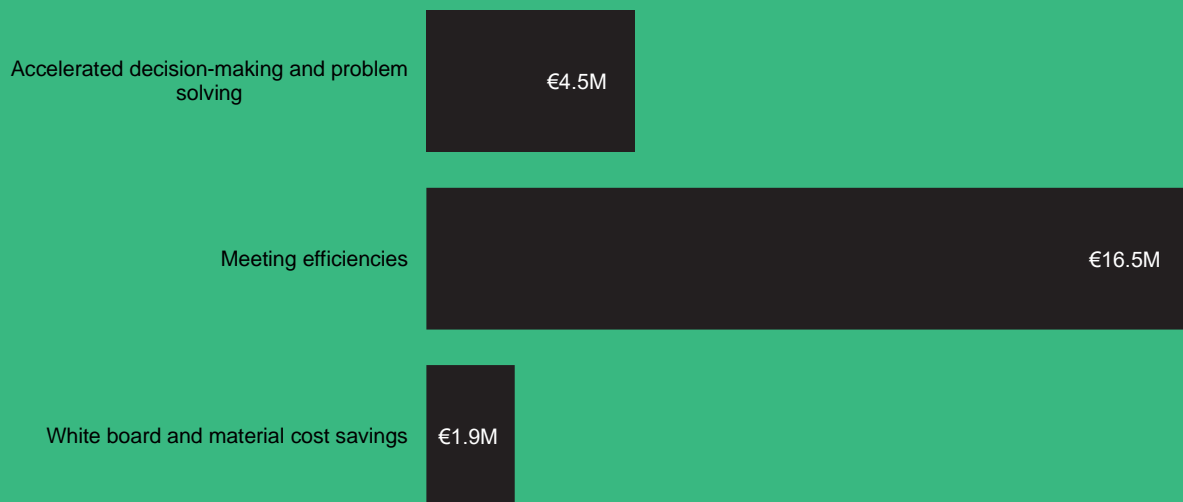
The interviews and financial analysis found that Sanofi experiences benefits of €22.9 million over six years versus costs of €10.4 million, adding up to a net present value (NPV) of €12.5 million and an ROI of 121%.

**“People improve their collaboration; the feedback is that it is attractive, ergonomic, collaborative, etc., because it’s a human-centric tool.”**

*Global operations, Sanofi HQ*



### Benefits (Six-Year)



**“It is much easier to share a screen or room, it is much more transparent. Everyone knows information will be seen by leaders. Overall, escalation is 25% faster because we are able to include finance, supply chain, or others quickly and easily into the meeting, rather than emailing.”**

Operational excellence leader and iObeya system owner, Sanofi Framingham site



## TEI FRAMEWORK AND METHODOLOGY

From the information provided in the interviews, Forrester constructed a Total Economic Impact™ framework for those organizations considering an investment in the Visual Management System.

The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the impact that Visual Management System can have on an organization.

### DISCLOSURES

Readers should be aware of the following:

This study is commissioned by iObeya and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the study to determine the appropriateness of an investment in Visual Management System.

iObeya reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.

iObeya provided the customer names for the interview but did not participate in the interview.



### DUE DILIGENCE

Interviewed iObeya stakeholders and Forrester analysts to gather data relative to Visual Management System.



### INTERVIEWS

Interviewed four representatives in different parts of Sanofi using the Visual Management System to obtain data with respect to costs, benefits, and risks.



### FINANCIAL MODEL FRAMEWORK

Constructed a financial model representative of Sanofi using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the interviewee.



### CASE STUDY

Employed four fundamental elements of TEI in modeling the investment impact: benefits, costs, flexibility, and risks. Given the increasing sophistication of ROI analyses related to IT investments, Forrester's TEI methodology provides a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

# Sanofi's iObeya Visual Management System Journey

■ Drivers leading to the Visual Management System investment

## Interviews

Role	Department or site	iObeya perspective
Global head of digital and IS/IT for industrial affairs and corporate functions	Headquarters, France	Leadership
Global operations	Headquarters, France	Global operations
Operational excellence leader	Framingham site, US	End user and system owner
Continuous improvement consultant	Specialty care team, US	End user, site support, and tool referent

### SANOFI OVERVIEW

Sanofi is a leading global pharmaceutical manufacturer, with more than 100,000 employees, 90 sites, and net sales over €36 billion. The business operating income reached nearly €10 billion in 2020, or nearly €105 million per site.

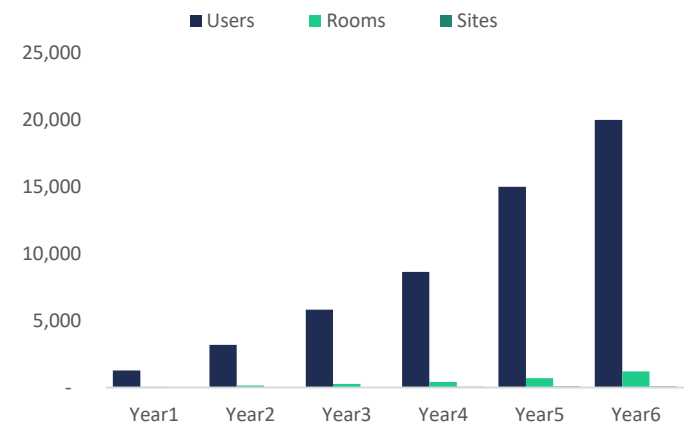
Forrester interviewed four decision-makers in different parts of Sanofi, with various perspectives regarding iObeya's Visual Management System, as summarized in the table above.

### IOBEYA DEPLOYMENT

Sanofi started deploying iObeya in 2015 and today it is used across all 90 sites around the world, including 69 manufacturing plants and 21 product development sites. During this period, the adoption of iObeya has grown significantly over the six-year period.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Users	1,271	3,177	5,286	8,644	15,000	20,000
Rooms	60	150	275	408	708	1,200
Sites	7	17	31	46	80	90

- The number of users has increased from 1,271 to 20,000. Employee adoption has reached over 85% at some sites.
- The number of iObeya rooms has grown from 60 to 1,200.
- The number of sites has increased from 7 to 90.



iObeya has been integrated into the Sanofi Manufacturing System, which includes standard tools such as +QDCI (Safety, Quality, Delivery, Cost, Involvement) KPI system for performance management, +DCM (Daily Capacity Management), Team Board, and skills matrices. The digitization of lean rituals enabled the continued use of tools, standards, and processes which form the core of the Sanofi Manufacturing System.



Note that videoconferencing and screen sharing functionality is required for many of the benefits, and it was assumed that this was available across Sanofi, as it is in most organizations today. For this study, Forrester has modeled benefits and costs over six years.

**Deployment details**

- **20,000 users**
- **2,500 teams**
- **1,200 rooms**
- **90 sites**

**“When you are using paper-based systems, you have one-month memory, and you have things that you can forget to escalate.”**

*Global operations, Sanofi HQ*

**“We were unable to include people who were working from home in meetings and there was significant effort involved in updating the board design.”**

*Operational excellence leader and iObeya system owner, Sanofi*

# Analysis Of Benefits

■ Quantified benefit data

Total Benefits									
Ref.	Benefit	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total	Present Value
Atr	Accelerated decision-making and problem solving	€178,296	€433,005	€789,598	€1,171,661	€2,037,671	€2,292,380	€6,902,611	€4,472,662
Btr	Meeting efficiencies	€604,811	€1,508,783	€2,765,707	€4,103,485	€7,121,874	€9,563,063	€25,667,723	€16,497,631
Ctr	Whiteboard and material cost savings	€30,186	€75,454	€138,368	€205,295	€356,250	€2,375,000	€3,180,553	€1,895,806
	Total benefits (risk-adjusted)	€813,293	€2,017,242	€3,693,672	€5,480,441	€9,515,796	€14,230,443	€35,750,887	€22,866,099

## ACCELERATED DECISION-MAKING AND PROBLEM SOLVING

**Evidence and data.** Sanofi shared that an important benefit of the iObeya Visual Management System is that it enables improvements such as best practices, to be implemented faster, whether across the network or at a single site. Similarly, it also enables problems to be resolved more quickly through faster decision-making, exchange escalation, and coordinated actions. iObeya can be used across sites and hierarchy levels, from the shop floor, through

management, up to leadership to ensure better continuity and access.

**Modeling and assumptions.** In order to quantify the value of this benefit, a number of assumptions were made:

- On average, each site experiences two blocking issues and improvements per year. Blocking issues result in production stopping altogether; blocking improvements include the actions taken to avoid blocking issues.
- On average, each site experiences four critical issues and improvements per year. Critical issues halve the rate of production; critical improvements include the actions taken to avoid critical issues.
- On average, each site experiences 10 important issues and improvements per year. Important issues include slowing production down by 10%; important improvements include the actions taken to avoid important issues.
- Prior to iObeya, escalation and implementation time took on average 2 hours. iObeya accelerates escalations and implementations by 25%.

**“It has definitely had an impact on product lead time — so it will speed up the time to market, and it will improve productivity because you don’t have deviations, you are preventing them and because you can easily check things every day.”**

*Global operations, Sanofi HQ*

- The average annual business operating income per site is €105 million. This is equivalent to nearly €12,000 on an hourly basis.

**Risks.** It is difficult to model the impact of faster escalations and implementations of improvements across a large manufacturing organization with 90 sites in different parts of the world. The assumptions and metrics used are estimates and so could be inaccurate, and thus result in a reduced benefit value. To account for such uncertainties, Forrester adjusted this benefit downward by a moderate-to-high 15%.

**Results.** This yielded a six-year, risk-adjusted total PV (discounted at 10%) of €4,472,662. This is equivalent to 20% of the total benefits over the six-year period.

**“Meetings are more data-driven, and so we are able to really focus on the issues and priorities. I think it’s more efficiency as well, but at the same time it is allowing us to accelerate our decision-making and problem-solving.”**

*Global operations, Sanofi HQ*

**“iObeya has helped to increase connectivity amongst teams, which has helped to eliminate additional email traffic or even additional meetings. For example, escalations or hot topics that would typically become an email chain can be addressed during a team’s meeting. If a specific question needs to be addressed, it is now easy to attend another team’s virtual meeting in iObeya to raise that question, [i.e.,] in a virtual face-to-face meeting.”**

*Continuous improvement consultant,  
Sanofi manufacturing system team for  
specialty care*

Accelerated Decision-Making And Problem Solving								
Ref.	Metric	Source	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
A1	Number of sites	Interview	7	17	31	46	80	90
A2	Number of blocking issues & upgrades (2 per site per year)	2*A1	14	34	62	92	160	180
A3	Average time to escalate issue/implement upgrade (2 hours each)	A2*2	28	68	124	184	320	360
A4	Reduced time to escalate issue/implement upgrade (25% faster)	25%*A3	7	17	31	46	80	90
A5	Average hourly business operating income per site	€105,000,000/365/24	€11,986	€11,986	€11,986	€11,986	€11,986	€11,986
<b>A6</b>	<b>Accelerated decision-making and problem solving: blocking issues</b>	<b>A4*A5</b>	<b>€83,904</b>	<b>€203,767</b>	<b>€371,575</b>	<b>€551,370</b>	<b>€958,904</b>	<b>€1,078,767</b>
A7	Number of critical issues & upgrades (4 per site per year)	4*A1	28	68	124	184	320	360
A8	Average time to escalate issue/implement upgrade (2 hours each)	A7*2	56	136	248	368	640	720
A9	Reduced time to escalate issue/implement upgrade (25% reduction)	25%*A8	14	34	62	92	160	180
<b>A10</b>	<b>Accelerated decision-making and problem-solving: critical issues</b>	<b>A8*A5/2</b>	<b>€83,904</b>	<b>€203,767</b>	<b>€371,575</b>	<b>€551,370</b>	<b>€958,904</b>	<b>€1,078,767</b>
A11	Number of important issues & upgrades (10 per site per year)	10*A1	70	170	310	460	800	900
A12	Average time to escalate issue/implement upgrade (2 hours each)	A11*2	140	340	620	920	1,600	1,800
A13	Reduced time to escalate issue/implement upgrade (25% reduction)	25%*A12	35	85	155	230	400	450
<b>A14</b>	<b>Accelerated decision-making and problem-solving: important issues</b>	<b>A13*A4/10</b>	<b>€41,952</b>	<b>€101,884</b>	<b>€185,788</b>	<b>€275,685</b>	<b>€479,452</b>	<b>€539,384</b>
At	Accelerated decision-making and problem solving	A6+A10+A14	€209,760	€509,418	€928,938	€1,378,425	€2,397,260	€2,696,918
	Risk adjustment	↓15%						
Atr	Accelerated decision-making and problem solving (risk-adjusted)		€178,296	€433,005	€789,598	€1,171,661	€2,037,671	€2,292,380
<b>Six-year total: \$6,902,611</b>			<b>Six-year present value: \$4,472,662</b>					

## MEETING EFFICIENCIES

**Evidence and data.** All the interviewees agreed that the biggest benefit of iObeya is improved collaboration, resulting in meeting efficiencies. Such benefits are not easy to capture, but it was clear that this was the area of biggest impact.

The interviewees indicated that use of iObeya did not impact the number of meetings or their length, instead it reduced meeting preparation time, time needed for information updating, and documentation of meeting outcomes. It also saves travel time in that remote workers and leaders do not need to travel across campus or from different sites to attend meetings.

This also encompasses improved scalability and flexibility to quickly add, remove, or modify meeting instances to adapt to organizational changes and growth.

- On an average day, 20% of employees are either working remotely (e.g., at home) or in a different building on site. And on average, these employees each save 15 minutes every day in travel and meeting access time.
- Site and network leaders also save travel time and can remotely visit the Gemba and provide coaching remotely.
- Only 50% of this time is put back to productive use.

**Risks.** The extent of these efficiencies could be lower in other organizations due to fewer employees working remotely, campuses being smaller, or sites being closer together. To account for these risks, Forrester adjusted this benefit downward by 10%.

**“The biggest benefits are time efficiencies, collaboration, and sharing information. Often a lot of information has to be shared, and it is complicated. iObeya really helps in being able to show such information and if there is a large volume of information to share.”**

*Global head of digital and IS/IT for industrial affairs and corporate functions, Sanofi HQ*

**“I would say there is an element of time savings due to iObeya as the time required to walk or travel across a campus or building has now been eliminated.”**

*Continuous improvement consultant, Sanofi manufacturing system team for specialty care*

**Modeling and assumptions.** To quantify this benefit, it was assumed that:

- Every team saves 30 minutes of meeting time every week.
- Room administrators also save 30 minutes per week as they can directly access the boards and more quickly implement systemwide changes.

**Results.** This yielded a six-year, risk-adjusted total PV of €16,497,631. This is equivalent to 72% of the total benefits over the six-year period.

**“iObeya has reduced meeting preparation time, and we are better able to track actions, escalations, trend data, standardize communications, [and] create and integrate custom visual boards to solve specific problems.”**

*Operational excellence leader and iObeya system owner, Sanofi Framingham site*

Meeting Efficiencies								
Ref.	Metric	Source	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
B1	Number of teams using iObeya	Interview	159	397	728	1,081	1,875	2,500
B2	Maintenance efficiencies (every team saves 0.5 hours per week)	$0.5*B1*52$	4,131	10,325	18,935	28,093	48,750	65,000
B3	Number of room administrators using iObeya (1 per room)	Interview	60	150	275	408	708	1,200
B4	Maintenance efficiencies (every room administrator saves 0.5 hours per week)	$0.5*52*B3$	1,560	3,900	7,150	10,608	18,408	31,200
B5	Average number of remote workers per day (20% of team, 8 employees per team)	$20%*8*B1$	254	635	1,165	1,729	3,000	4,000
B6	Total time saved by remote workers (15 minutes per day per remote worker)	$B5*52*5/4$	16,523	41,301	75,738	112,372	195,000	260,000
B7	Total hours saved	$B2+B4+B6$	22,214	55,526	101,823	151,073	262,158	356,200
B8	Average hourly rate (fully loaded)	$(\$80,000+35\%)/8/5/48$	€56	€56	€56	€56	€56	€56
B9	Total time saved by site and network leaders (8 hours per site per month)	$A1*8*12$	672	1,632	2,976	4,416	7,680	8,640
B10	Average hourly rate of leaders (fully loaded)	$(\$200,000+35\%)/8/5/48$	€141	€141	€141	€141	€141	€141
B11	Productivity conversion rate		50%	50%	50%	50%	50%	50%
Bt	Meeting efficiencies	$((B7*B8)+(B9*B10))*B11$	€672,012	€1,676,426	€3,073,008	€4,559,428	€7,913,194	€10,625,625
	Risk adjustment	↓10%						
Btr	Meeting efficiencies (risk-adjusted)		€604,811	€1,508,783	€2,765,707	€4,103,485	€7,121,874	€9,563,063
<b>Six-year total: \$25,667,723</b>			<b>Six-year present value: \$16,497,631</b>					

**WHITEBOARD AND MATERIAL COST SAVINGS**

**Evidence and data.** The cost of whiteboards and other physical materials previously used are clear

cost savings that all the interviewees at Sanofi highlighted.



**Modeling and assumptions.** The materials cost savings are estimated by assuming the following:

- The annual cost of materials, which include post-its, markers, magnets, lamination, and so on, per team is €200.
- The cost of a whiteboard is €800, and every room requires one whiteboard.
- Whiteboards need to be replaced every five years.

**Risks.** A low risk adjustment of 5% was applied to adjust for higher prices and/or the use of materials and whiteboards in other organizations.

**Results.** This yielded a six-year, risk-adjusted present value of this benefit of €1,895,806. This is equivalent to 8% of the total benefits.

**Every team saves €200 on materials every year; the €800 whiteboards are also no longer needed.**

Whiteboard And Material Cost Savings								
Ref.	Metric	Source	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
C1	Material cost saving per team (paper, magnets, laminate, etc.)		€200	€200	€200	€200	€200	€200
C2	Whiteboard cost		€0	€0	€0	€0	€0	€800
Ct	Whiteboard and material cost savings	(C1*B1)+(C2*B1) Note: B1 from table p. 14	€31,775	€79,425	€145,650	€216,100	€375,000	€2,500,000
	Risk adjustment	↓5%						
Ctr	Whiteboard and material cost savings (risk-adjusted)		€30,186	€75,454	€138,368	€205,295	€356,250	€2,375,000
<b>Six-year total: €3,180,553</b>			<b>Six-year present value: €1,895,806</b>					

**UNQUANTIFIED BENEFITS**

Additional benefits that the customer experienced but was not able to quantify include:

- **Digital integrations, automated KPIs, and reporting.** With iObeya, all KPIs and reporting data are digitally stored; previously, this data may have been captured by images of the whiteboards. This facilitates KPI monitoring over time and makes it much easier to check a board from some time ago. Digital integration also enables the use of KPI linkages, shared boards, and hyperlinks and improves data accuracy.
- **Employee experience.** The ability to support remote working not only increases efficiency but it also improves the employee experience by supporting home and remote working and reducing commute time. It also improves communications transparency; employees know that concerns and contributions they make will be seen by other teams. Further digital development from learning and using iObeya for all users also improves engagement. A better employee experience can improve metrics such as staff retention and absenteeism, and it can also help facilitate better talent acquisition.

- **Reduced travel costs.** In some use cases, iObeya fully replaces the need for in-person meetings because it has all the features and capabilities of physical whiteboards. This can result in substantial savings, including costs related to travel and catering and additional reduced travel time.
- **Lean program maturity and scalability.** As a lean management tool, iObeya adds to the lean program, which includes the ability to remote Gemba visits and coaching, improve best practice exchange, create better standardization, easily and quickly adjust meeting instances, and adapt to organizational changes, and improve meeting management.
- **Reduced environmental impact.** iObeya also helps Sanofi in its sustainability efforts by supporting remote working, and therefore reducing the need to commute, greenhouse gas emissions from employee travel, and the amount of paper and other materials used. These need to be counterbalanced by the impact of using iObeya, particularly the energy consumed by the digital screens and the embodied energy of their manufacture.

## FLEXIBILITY

Sanofi also shared that they hope in the future to be able to better communicate with partners and important suppliers through iObeya. This takes time and requires a very close working relationship, a step-by-step approach, and would have to be implemented on a partner-by-partner basis. However, once implemented there would likely be similar benefits for both Sanofi and the partner involved.

**“There is a sustainability impact in that it reduces the need to travel. It is also paperless, reducing the demand for post-its, magnets, laminations and other materials.”**

*Global head of digital and IS/IT for industrial affairs and corporate functions, Sanofi HQ*

**“When people are in the room, they are more involved and more committed. iObeya also makes employees jobs easier so they are more dedicated, more willing to support others and more focused on the project.”**

*Global head of digital and IS/IT for industrial affairs and corporate functions, Sanofi HQ*

# Analysis Of Costs

Quantified cost data

Total Costs										
Ref.	Cost	Initial	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total	Present Value
Dtr	License and services fees	€0	€390,674	€346,500	€640,605	€804,300	€1,200,323	€1,323,053	€4,705,454	€3,164,300
Etr	Training costs	€0	€58,503	€131,082	€230,361	€328,804	€587,813	€796,208	€2,132,769	€1,373,591
Ftr	Implementation and setup costs	€61,875	€151,525	€231,275	€326,975	€350,900	€894,025	€781,550	€2,798,125	€1,872,376
Gtr	Ongoing costs	€0	€157,658	€382,883	€698,198	€1,036,035	€1,801,800	€2,027,025	€6,103,598	€3,954,928
	Total costs (risk-adjusted)	\$61,875	\$758,359	\$1,091,740	\$1,896,138	\$2,520,039	\$4,483,961	\$4,927,835	\$15,739,946	\$10,365,195

## LICENSE AND SERVICES FEES

**Evidence and data.** The license fees are charged on a per-room basis and include the software and infrastructure costs; these services include implementation, consulting, and training support.

**Modeling and assumptions.** The license and services fees generally grow as iObeya is implemented across more and more sites and demand for the number of rooms grows.

**Risks.** A small 5% risk adjustment was applied, given that pricing can vary by region and contract size.

**Results.** This results in a six-year, risk-adjusted present value of €3,164,300. This is the largest cost component, accounting for 31% of the total costs.

License And Services Fees										
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
D1	License and services fees			€372,070	€330,000	€610,100	€766,000	€1,143,165	€1,260,050	
Dt	License and services fees	D1	€0	€372,070	€330,000	€610,100	€766,000	€1,143,165	€1,260,050	
	Risk adjustment	↑5%								
Dtr	License and services fees (risk-adjusted)		€0	€390,674	€346,500	€640,605	€804,300	€1,200,323	€1,323,053	
<b>Six-year total: €4,705,454</b>					<b>Six-year present value: €3,164,300</b>					

## TRAINING COSTS

**Evidence and data.** When new teams are brought on board to use iObeya, users, room administrators, and system owners need to be subsequently trained.

- Users include all members of a team, in which there are eight on average.
- There is one room administrator per room.
- There is, on average, one system owner for every two sites; this varies depending on the size of the site.

**Modeling and assumptions.** The costs of each are calculated as follows:

- For annual training purposes, iObeya users require 30 minutes of training, while system owners require 20 hours. Each new room administrator requires 4 hours of training to get up and running.
- The total number of hours required for training is then multiplied by the average fully loaded hourly rate.

**Risks.** A moderate 10% risk adjustment was applied, because training time can take longer in other organizations.

**Results.** This resulted in a six-year, risk-adjusted present value of €1,373,591. This is equivalent to 13% of the total costs.

Training Costs									
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
E1	Number of users	Interviews		1,271	3,177	5,826	8,644	15,000	20,000
E2	General user training (0.5 hours each)	$E1 \times 0.5$		636	1,589	2,913	4,322	7,500	10,000
E3	Number of rooms	Interviews		60	150	275	408	708	1,200
E4	Number of new rooms	$E15(\text{year } n) - E15(\text{year } n-1)$		60	90	125	133	300	492
E5	Room administrator training (4 hours each per new room)	$4 \times E5$		240	360	500	532	1,200	1,968
E6	Number of sites using iObeya	Interviews		7	17	31	46	80	90
E7	System owner training (1 owner for 2 sites, 20 hours each)	$E6/2 \times 20$		70	170	310	460	800	900
E8	Total training hours	$E2 + E5 + E7$		946	2,119	3,723	5,314	9,500	12,868
E9	Average hourly rate (fully loaded)	$(\text{€}80,000 + 35\%) / 8/5/48$		€56	€56	€56	€56	€56	€56
Et	Training costs	$E8 \times E9$	€0	€53,184	€119,166	€209,419	€298,913	€534,375	€723,825
	Risk adjustment	↑10%							
Etr	Training costs (risk-adjusted)		€0	€58,503	€131,082	€230,361	€328,804	€587,813	€796,208
<b>Six-year total: \$2,132,769</b>				<b>Six-year present value: \$1,373,591</b>					

### IMPLEMENTATION AND SETUP COSTS

**Evidence and data.** Implementation and setup costs include a few different cost components:

- The initial upfront planning and implementation time.
- Electronic screen hardware, installation, and replacement costs.
- The time to set up the iObeya room and settings for every new team.

**Modeling and assumptions.** The costs of each of these are calculated as follows:

- The initial implementation and planning time requires 100 hours from each of the 10 FTEs. This was multiplied by the average fully loaded salary at the hourly rate.
- Videoconferencing and screen-share capabilities are available for all users through their PC configuration.
- One screen is enough to cover four teams, though only half of teams need a screen; each of

the screens cost €5,000 including installation. Screens must be replaced every four years.

- For every new screen using iObeya, the system setup time is 40 hours, which is the time to configure the software and network infrastructure for the rooms.

**Risks.** A moderate 10% risk adjustment was applied, because implementation and setup time can take

longer in other organizations; screen hardware, installation and replacement rates may also differ.

**Results.** This resulted in a six-year risk adjusted present value of €1,872,376. This is equivalent to 18% of the total costs.

Implementation And Setup Costs									
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
F1	Average hourly rate (fully loaded)	$(\$80,000+35\%)/8/5/48$	€56	€56	€56	€56	€56	€56	€56
F2	Initial planning and implementation time (hours)	100 hours for each of 10 FTEs	1,000						
F3	<b>Initial planning and implementation cost</b>	<b>F1*F2</b>	<b>€56,250</b>						
F4	Number of teams using iObeya	Interviews		159	397	728	1,081	1,875	2,500
F5	Number of new teams using iObeya	$E4(\text{year } n)-E4(\text{year } n-1)$		159	238	331	352	795	625
F6	Electronic screen hardware & installation cost	Per screen cost		€5,000	€5,000	€5,000	€5,000	€5,000	€5,000
F7	Number of new screens (50% of teams, 4 teams per screen)	$F5*50\%/4$ (rounded down)		19	29	41	44	99	78
F8	Number of screen replacements	Assume replaced every 4 years		0	0	0	0	19	29
F9	<b>Electronic screen costs</b>	<b>F6*(F7+F8)</b>		<b>€95,000</b>	<b>€145,000</b>	<b>€205,000</b>	<b>€220,000</b>	<b>€590,000</b>	<b>€535,000</b>
F10	System setup time (40 hours/new screen)	$40*F7$		760	1,160	1,640	1,760	3,960	3,120
F11	<b>System setup costs</b>	<b>F10*F1</b>		<b>€42,750</b>	<b>€65,250</b>	<b>€92,250</b>	<b>€99,000</b>	<b>€222,750</b>	<b>€175,500</b>
Ft	Implementation and setup costs	$F3+F9+F11$	€56,250	€137,750	€210,250	€297,250	€319,000	€812,750	€710,500
	Risk adjustment	↑10%							
Ftr	Implementation and setup costs (risk-adjusted)		€61,875	€151,525	€231,275	€326,975	€350,900	€894,025	€781,550
<b>Six-year total: \$2,798,125</b>				<b>Six-year present value: \$1,872,376</b>					

**ONGOING COSTS**

**Evidence and data.** The ongoing costs include the additional time required for the governance and maintenance of the iObeya platform.

- Governance includes the update and changes required across sites and the network of sites. This includes updating standards and branding as well as managing access and control capabilities.
- Maintenance refers to daily upkeep of the rooms and boards such as implementing new ideas, management, and support.

**Modeling and assumptions.** Sanofi reported that iObeya requires 5 hours of governance per site per week and 2 hours maintenance per site per week. The cost of these hours can then be calculated using the hourly rates of the average fully loaded salary.

**Risks.** A moderate risk adjustment of 10% was applied given that the amount of time required for maintenance and governance can vary for other organizations depending on the system setup.

**Results.** This yielded a six-year, risk-adjusted present value of €3,954,928. This is the equivalent of 38% of the total costs, which is a little lower than the license and services fees.

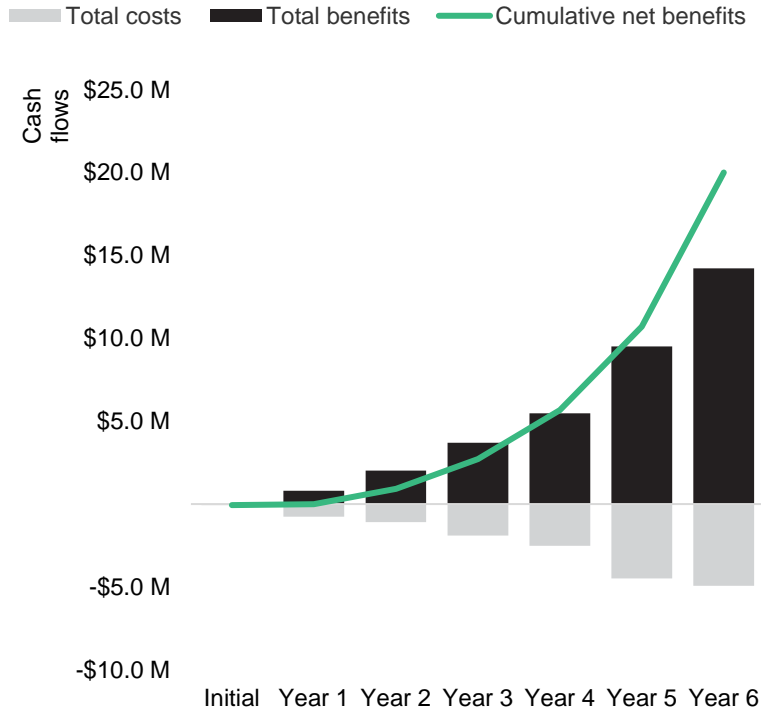
Ongoing Costs									
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
G1	Governance hours (4 hours per site per week)	4*52*E7		1,456	3,536	6,448	9,568	16,640	18,720
G2	Maintenance hours (3 hours per week per site)	3*52*E1		1,092	2,652	4,836	7,176	12,480	14,040
G3	Average hourly rate (fully loaded)	(€80,000+35%)/8/5/48		€56	€56	€56	€56	€56	€56
Gt	Ongoing costs	(G1+G2)*G3	€0	€143,325	€348,075	€634,725	€941,850	€1,638,000	€1,842,750
	Risk adjustment	↑10%							
Gtr	Ongoing costs (risk-adjusted)		€0	€157,658	€382,883	€698,198	€1,036,035	€1,801,800	€2,027,025
<b>Six-year total: \$6,103,598</b>					<b>Six-year present value: \$3,954,928</b>				



# Financial Summary

## CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

### Cash Flow Chart (Risk-Adjusted)



The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

These risk-adjusted ROI, NPV, and payback period values are determined by applying risk-adjustment factors to the unadjusted results in each Benefit and Cost section.

### Cash Flow Analysis (Risk-Adjusted Estimates)

	Initial	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total	Present Value
Total costs	(€61,875)	(€758,359)	(€1,091,740)	(€1,896,138)	(€2,520,039)	(€4,483,961)	(€4,927,835)	(€15,739,946)	(€10,365,195)
Total benefits	€0	€813,293	€2,017,242	€3,693,672	€5,480,441	€9,515,796	€14,230,443	€35,750,887	€22,866,099
Net benefits	(€61,875)	€54,934	€925,502	€1,797,534	€2,960,403	€5,031,835	€9,302,608	€20,010,941	€12,500,904
ROI									121%
Payback period									13.0 months

## Appendix A: Total Economic Impact

Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

### TOTAL ECONOMIC IMPACT APPROACH

**Benefits** represent the value delivered to the business by the product. The TEI methodology places equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization.

**Costs** consider all expenses necessary to deliver the proposed value, or benefits, of the product. The cost category within TEI captures incremental costs over the existing environment for ongoing costs associated with the solution.

**Flexibility** represents the strategic value that can be obtained for some future additional investment building on top of the initial investment already made. Having the ability to capture that benefit has a PV that can be estimated.

**Risks** measure the uncertainty of benefit and cost estimates given: 1) the likelihood that estimates will meet original projections and 2) the likelihood that estimates will be tracked over time. TEI risk factors are based on "triangular distribution."

The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1 that are not discounted. All other cash flows are discounted using the discount rate at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations in the summary tables are the sum of the initial investment and the discounted cash flows in each year. Sums and present value calculations of the Total Benefits, Total Costs, and Cash Flow tables may not exactly add up, as some rounding may occur.



### PRESENT VALUE (PV)

The present or current value of (discounted) cost and benefit estimates given at an interest rate (the discount rate). The PV of costs and benefits feed into the total NPV of cash flows.



### NET PRESENT VALUE (NPV)

The present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made, unless other projects have higher NPVs.



### RETURN ON INVESTMENT (ROI)

A project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits less costs) by costs.



### DISCOUNT RATE

The interest rate used in cash flow analysis to take into account the time value of money. Organizations typically use discount rates between 8% and 16%.



### PAYBACK PERIOD

The breakeven point for an investment. This is the point in time at which net benefits (benefits minus costs) equal initial investment or cost.

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