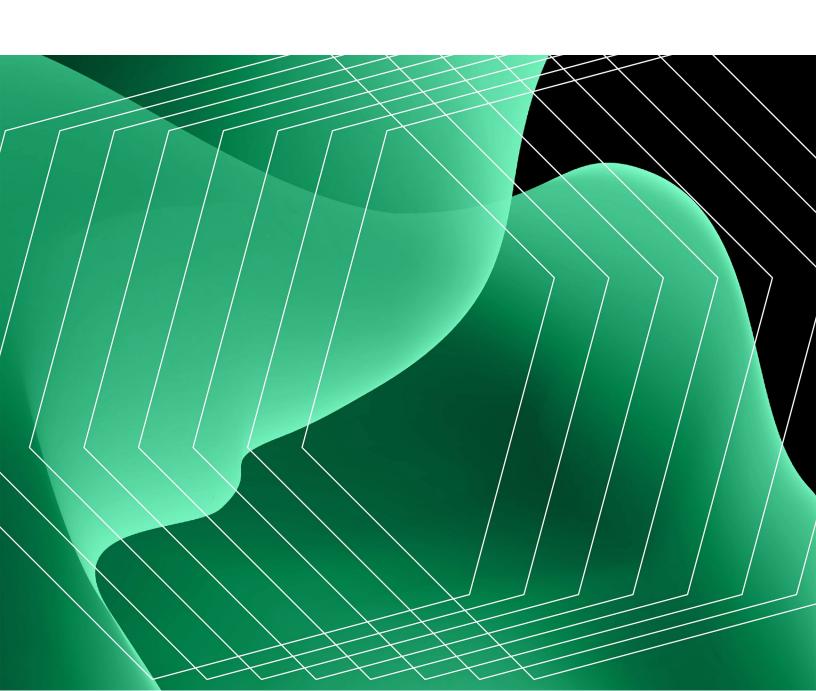


# The Total Economic Impact™ Of Meta Quest

Cost Savings And Business Benefits Enabled By Enterprise Learning And Development With Meta Quest

A FORRESTER TOTAL ECONOMIC IMPACT STUDY COMMISSIONED BY META, JULY 2025



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#### **ABOUT FORRESTER CONSULTING**

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# **Executive Summary**

Meta Quest enables enterprise learning and development teams to design and innovate on efficient and engaging training offerings for users across many industries and roles, improving learner knowledge retention and training productivity while saving the organization on expenses traditionally associated with in-person training.

<u>Meta Quest</u> is an extended reality (XR) platform that consists of a line of first-party virtual reality (VR) headsets and the Meta Horizon OS. For enterprise learning and development, Meta Quest allows organizations to deploy XR training use cases across many different industries and roles to reduce barriers around user training at scale while increasing interactivity and engagement.

Meta commissioned Forrester Consulting to conduct a Total Economic Impact<sup>™</sup> (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Meta Quest.<sup>1</sup> The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Quest on their organizations.



Return on investment (ROI)

219%



Net present value

\$4.2M

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed six decision-makers from four organizations with experience using Meta Quest. For the purposes of this study, Forrester aggregated the experiences of the interviewees and combined the results into a single composite organization, which is an industry-agnostic enterprise organization with revenue of \$1 billion per year and 10,000 employees — 33% of whom train with Meta Quest.

Interviewees said that prior to using Meta Quest, their organizations struggled to efficiently scale learning and development offerings. User training was prone to downtime for some users (especially technical users) as they waited their turn for "hands-on" training experiences. The cost and complexity of in-person training environments was also of concern, as safe and effective training — especially around technical tasks in fields such as healthcare or manufacturing — was expensive, difficult to scale, and prone to additional costs over time as equipment needed to be replaced or became obsolete. Travel costs for both trainers and

trainees to and from physical learning environments drove costs related to physical learning even higher, especially for global enterprises.

After the investment in Meta Quest, the organizations' learning and development teams gained the ability to design and innovate on efficient and engaging training offerings for users across different industries and different roles, which improved learner knowledge retention and training productivity while saving the organization on expenses traditionally associated with in-person training. Some of the organizations also unlocked additional revenue and profit-generating business opportunities, including the "productization" of training, scaling training across more users than before, and supporting end-customers with Meta Quest training to improve the likelihood of customer retention.

#### **KEY FINDINGS**

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

- Acceleration of user onboarding times by 25%. With Meta Quest, the composite
  organization onboards users irrespective of geography or timing and trains them to
  effectiveness faster while supporting an efficient hands-on learning experience. Over
  three years, this represents more than \$1.7 million PV to the composite organization in
  user productivity and avoided downtime.
- Reduction of task worker training times by up to 75% (or 24 hours per user annually). By moving training to Meta Quest, the composite organization's task workers train more efficiently, can train "on-demand," and train more often than before, saving on productivity while improving the depth of the learning experience and increasing the likelihood of knowledge retention. This represents nearly \$738,000 PV in task worker productivity savings to the composite organization over three years.
- Reduction of knowledge worker training times by up to 50% (or 16 hours per user annually). The composite organization's general users (e.g., sales personnel, business personnel, etc.) also benefit from improvements to training efficiency with VR training on Meta Quest. This represents more than \$576,000 PV in productivity savings to the composite organization over three years.
- Reduction of travel and in-person training expenses by 50%. By eliminating the physical requirements often associated with technical training or one-to-many trainings, the composite organization shifts from using in-person training to VR training on

- Meta Quest, which saves on user and trainer travel and expenses, as well as the costs of training development and logistics (e.g., venues, supplies, etc.). The composite organization avoids nearly \$1.6 million PV in training-related expenses over three years.
- Profit improvement of \$1.5 million over three years. Meta Quest provides
  opportunities for the composite organization to generate additional revenue or business
  opportunities, iterate on product offerings, scale beyond what was previously possible,
  retain more customer wallet share, and ultimately improve profitability by scaling training
  efforts to more users.

**Unquantified benefits.** Benefits that provide value for the composite organization but are not quantified for this study include:

- **Improved customer experience.** Users at the composite organization who are trained on Meta Quest are more likely to deliver a better customer experience for their customers or stakeholders as a result of deeper learning or more frequent training.
- Organizational knowledge retention from more frequent and engaging training.
   Setting up VR training on Meta Quest makes learning more efficient for the composite's users who spend more time on-task experience less downtime and have access to on-demand training, while the interactivity and social components of the training make the learning experience more engaging. This combination of training frequency and increased engagement contributes to the organization's learning and development culture of increased knowledge retention and demand for training.
- Improved safety and feasibility for complex training environments. By moving
  would-be real-life training environments in potentially hazardous or consequential
  situations to virtual environments on Meta Quest, learners at the composite can practice
  and train more frequently in safe VR environments that might not be safe or feasible in
  person.
- End-user support from Meta. Support from Meta at both the organizational level and individual user level consistently ensures the composite organization's users are supported with a consistent set of training offerings on hardware that is intuitive and stable.

**Costs.** Three-year, risk-adjusted PV costs for the composite organization include:

Meta Quest hardware costs. The composite organization deploys 1,000 Meta Quest 3
headsets in staged deployments (500 initially, then 250 each in Years 1 and 2), totaling
\$588,000 PV in device costs over three years.

Meta Quest training partner and internal development costs. The composite
organizations pays an external partner and dedicates internal FTE resources to its Meta
Quest adoption, training development and software, and ongoing training iteration. This
represents PV costs of \$1.3 million over three years.

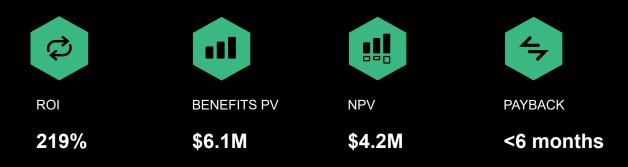
The financial analysis that is based on the interviews found that a composite organization experiences benefits of \$6.1 million over three years versus costs of \$1.9 million, adding up to a net present value (NPV) of \$4.2 million and an ROI of 219%.

Avoided in-person training expenses (three-year PV)

\$1.78M

"Our users want more training on Meta Quest. I've been working in the training business for 25 years, and this is the first time I've been asked for more. They want more because they see the value of it, of course."

XR BUSINESS DEVELOPMENT MANAGER, AUTOMOTIVE MANUFACTURING



# **Benefits (Three-Year)**



# 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 Meta Quest.

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 Quest can have on an organization.

#### **DISCLOSURES**

Readers should be aware of the following:

This study is commissioned by Meta 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 Meta Quest. Forrester does not endorse Meta or its offerings. Although great care has been taken to ensure the accuracy and completeness of this model, Meta and Forrester Research are unable to accept any legal responsibility for any actions taken on the basis of the information contained herein.

Meta 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.

Meta provided the customer names for the interviews but did not participate in the interviews.

# 1. Due Dilligence

Interviewed Meta stakeholders and Forrester analysts to gather data relative to Quest.

#### 2. Interviews

Interviewed six decision-makers at four organizations using Quest to obtain data about costs, benefits, and risks.

### 3. Composite Organization

Designed a composite organization based on characteristics of the interviewees' organizations.

### 4. Financial Model Framework

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

# 5. 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.

# **The Meta Quest Customer Journey**

Drivers leading to the Meta Quest investment

Interviews				
Role	Industry	Region	Quest Users	
Vice president of academics and strategic initiatives	Education	North America	~2,500	
Director of academic and innovative technologies	Healthcare	North America	~7,000	
<ul> <li>President of innovation</li> </ul>				
Global product manager, digital services	Heavy equipment	Global	~3.000	
Product owner, digital training services	manufacturing	C.034i	5,000	
XR business development manager	Automotive manufacturing	Global	~22,000	

#### **KEY CHALLENGES**

While interviewees' organizations are in different industries, they faced common challenges before adopting Meta Quest, including the following — which are sorted by industry, but not limited to that particular industry:

#### Healthcare

• Getting learners "hands-on" learning experiences. Interviewees from a healthcare organization explained to Forrester that prior to using Meta Quest to train its healthcare students, training models were inherently limited to one-to-many models where learners experienced significant downtime. The president of innovation at the organization said: "As a learner in this model, you could have a very passive involvement in the training experience. Students could intentionally or unintentionally become wallflowers. They would get credit just for being present at the training. We had no way of knowing how much of their training was tied to work in actual [job simulations]. Then there was a lot of staff time spent setting up, getting trained or certified, cleaning the lab, and all of that."

Scaling learning and training delivery. Given the necessity of one-to-many training
models common in the field, interviewees explained that logistics around setting up
training hubs could be both costly and involved from a personnel standpoint. The
president of innovation continued: "We were dependent on where we could get space
[for the simulation labs]."

#### Education

- Staying on the leading edge of innovation. The vice president of academics and strategic initiatives at an educational organization explained that in order to innovate student experiences and drive enrollment, their organization invested in technologies such as VR and Meta Quest to innovate a student experience that was rapidly becoming an expectation for differentiation in the field. The interviewee noted: "We're a research-based school and are always looking to be on the bleeding edge of technology. We are always looking for different technologies, equipment, and software that will enhance our learning environment and help our students become future-ready."
- **Driving student engagement.** The same interviewee told Forrester their organization investigated technologies such as Meta Quest as a way to support additional student engagement that deepens the learning experience: "[With Meta Quest,] we recently had a sixth-grade class learning about different types of bacteria. They can read about it in a textbook, but it's certainly more engaging to actually explore that bacteria in the virtual world where they've applied their learning. Now they've actually traveled into a hospital and had to diagnose patients after they've learned about these different bacteria. There's no better way to replicate these experiences for students."
- Using technology that lacked the power or functionality required to support modern experiences. The interviewee in the education field explained that prior to investing in Meta Quest, their organization had another technology solution in place that was aimed at supporting student engagement. However, the solution lacked an interactive component that would allow students to engage with and apply their learning. The interviewee said: "[The prior solution] really only allowed the students to consume information. There was no social aspect to the virtual reality equipment. When we switched all of our headsets to the Meta Quest 3, that's when the real learning started."

# Manufacturing

Streamlining onboarding to support the speed of the business. Several
interviewees explained that in their organizations, above-average attrition rates for

technical employees placed a significant burden on learning and development personnel to train new employees as quickly as possible. In many cases, the complexity of the training tasks and geographical limitations hindered the ideal time to effectiveness for new hires, which ultimately cost the organizations money in employee downtime and/or reduced output.

- Meeting the expectations of the next generation of technical employees.
  Technologies such as VR and Meta Quest were cited as increasingly important to younger technicians who are more familiar with these capabilities from different applications. The XR business development manager at an automotive manufacturing organization explained: "We have historically had difficulties attracting the younger generation of technicians to our business. We can use virtual reality as a brand messenger to increase the value of our organization to the outside [talent market]. We can bring VR to events and job fairs, for example, for students to trial. It's a very important way for us to show that we are on forefront when it comes to learning technique."
- Scaling training for employees and customers in global organizations. The
  interviewees in the manufacturing industry explained that, in their global organizations,
  training staff in the proper environments prior to Meta Quest required travel, expenses,
  and pre-specified training dates. This drove significant learning and development-related
  costs while forcing an often-suboptimal training schedule on the individual employee
  level.
- Getting learners more time on task in a safe and secure environment. Given the complexity involved with some of the training requirements in the manufacturing industry, interviewees explained that while setting up safe training environments was expensive and time-consuming, it also necessitated a limited number of trainee participants at a given time. For example, the XR business development manager at the automotive manufacturing organization noted that training on high-voltage products required a great deal of care and oversight per trainee.

### Why Meta Quest?

The interviewees' organizations searched for a solution that could:

- Deliver the appropriate level of computing power on-device without the need for additional devices or resources.
- Easily scale across job functions and geographies.

- Be continually adapted for additional learning scenarios.
- Be intuitive enough for many different types of users.

"Meta [differentiates] with the quality of the equipment itself. The computational power, the clearness of the lenses, and the hand tracking is really important to us. Whenever we tested the competitor systems, our users felt like everything was slightly less responsive."

PRODUCT OWNER, DIGITAL TRAINING SERVICES, HEAVY EQUIPMENT MANUFACTURING

"At a school like ours, signature learning programs around VR help us stand out when it comes to driving student enrollment. Meta Quest has provided our school and our students with opportunities to deepen their learning while using cutting-edge technology. Not only do our students get deeper learning on the content they're exploring within VR, but they're also getting exposure as to what's possible from an innovation standpoint."

VICE PRESIDENT OF ACADEMICS AND STRATEGIC INITIATIVES, EDUCATION

"Some of our Meta Quest users don't even have smartphones. Many don't speak the same language. These are people who don't have a lot of technology experience, and the fact that Meta Quest is so intuitive and easy to use even for them is a huge benefit."

PRODUCT OWNER, DIGITAL TRAINING SERVICES, HEAVY EQUIPMENT MANUFACTURING

#### COMPOSITE ORGANIZATION

Based on the interviews, Forrester constructed a TEI framework, a composite company, and an ROI analysis that illustrates the areas financially affected. The composite organization is representative of the interviewees' organizations, and it is used to present the aggregate financial analysis in the next section. Given the diversity of use-cases for Meta Quest across many different industries, Forrester calculated the benefits for this report at a level that is industry-agnostic, but applicable to many different industries. The composite organization has the following characteristics:

- Description of composite. The composite organization is a global, \$1 billion-dollar enterprise with headquarters in both North America and Europe. The organization has 10,000 employees, 33% of whom train on Meta Quest in any given year. Of the 3,300 employees who train on Meta Quest, half (1,650 total) are technical employees who require specialized training. The other half are general users who require more generalized training that's not limited to product/service training, support training, etc.
- Deployment characteristics. The composite enterprise contracts with Meta to initially deploy 500 Quest 3 headsets (bundled with two-year Meta Horizon managed services) and then deploys an additional 250 headsets in Years 1 and 2 of the analysis, bringing the total number of headsets at the organization to 1,000. The composite works with a Meta partner to develop and iterate on its training offerings on a quarterly basis. It also dedicates internal FTE developer resources to supporting internal training development.

### **KEY ASSUMPTIONS**

Industry-agnostic enterprise

\$1 billion revenue

Global footprint with North American and European HQs

10,000 employees

3,300 Meta Quest users (half task workers, half general users)

Deploys Meta Quest for learning and development (e.g., onboarding, ongoing training

# **Analysis Of Benefits**

Quantified benefit data as applied to the composite

Total	Total Benefits									
Ref.	Benefit	Year 1	Year 2	Year 3	Total	Present Value				
Atr	Accelerated user onboarding	\$712,800	\$712,800	\$712,800	\$2,138,400	\$1,772,628				
Btr	Improved task worker training efficiency	\$296,208	\$296,208	\$296,208	\$888,624	\$736,625				
Ctr	Improved general user training efficiency	\$231,754	\$231,754	\$231,754	\$695,261	\$576,337				
Dtr	Savings on training-related travel expenses	\$633,600	\$633,600	\$633,600	\$1,900,800	\$1,575,669				
Etr	Savings on operational expenses	\$80,352	\$80,352	\$80,352	\$241,056	\$199,824				
Ftr	Improved business profitability	\$500,000	\$500,000	\$500,000	\$1,500,000	\$1,243,426				
	Total benefits (risk-adjusted)	\$2,454,714	\$2,454,714	\$2,454,714	\$7,364,141	\$6,104,509				

# **Accelerated User Onboarding**

**Evidence and data.** Interviewees said that by deploying Meta Quest for employee learning and development, their organizations aimed to mitigate the challenges associated with onboarding users at scale across a global company. They explained that with Meta Quest, their organizations can onboard more users irrespective of geography or timing and train them to effectiveness faster while promoting a deeper, more hands-on learning experience.

- The interviewees at the heavy equipment manufacturer explained that in their industry, annual attrition rates for service technicians and equipment operators at both their companies and end customers can reach 30%, which places a heavy emphasis on efficiently training and onboarding new employees. One of the interviewees said, "Anything we can do to reduce onboarding time and effort in our business is huge."
- One of the interviewees at the heavy equipment organization said that by leveraging training via Meta Quest, one customer reduced the onboarding time for new crane operators from eight weeks to six weeks (25%). They explained that each day of

downtime for a crane operator is a \$9,000 loss to the organization, highlighting the importance and impact of onboarding new operators as quickly as possible. Furthermore, post-training operator certification exam pass rates improved from 50% on traditional training processes to more than 90% on Meta Quest VR training, which increases the likelihood that operators are certified and onboarded as quickly as possible.

**Modeling and assumptions.** For the composite organization, Forrester makes the following assumptions:

- Of the employees who train with Meta Quest, 330 are onboarded annually.
- The composite has a 10% average annual employee attrition rate.
- Across all roles and onboarding training requirements, the composite's average pre-Meta Quest onboarding duration was 12 business days per user.
- With Meta Quest, the composite reduces its average onboarding duration by 25% per user. This is a conservative assumption.
- The composite's cost per user per day for onboarding is \$900, which includes training costs, employee downtime, and opportunity costs.

**Risks.** This benefit will vary among organizations based on:

- The organization's industry and users, as it relates to the onboarding complexity, length, and requirements.
- The degree to which employees trained on Meta Quest contribute to revenue, as it relates to the cost of employee downtime.
- The sophistication of the organization's pre-Meta Quest onboarding program(s), as it relates to the potential for improvements with Meta Quest.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$1.8 million.

Reduction of employee onboarding time with Meta Quest

25%

"Attrition is a significant challenge in our industry, as service technicians have a high turnover rate. Meta Quest allows us to reduce onboarding time and effort as we hire and train new technicians."

GLOBAL PRODUCT MANAGER, DIGITAL SERVICES, HEAVY EQUIPMENT MANUFACTURING

Acce	elerated User Onboarding						
Ref.	Metric	Source	Year 1	Year 2	Year 3		
A1	Total employees trained with Meta Quest (across all roles)	Composite	3,300	3,300	3,300		
A2	Average attrition rate	Interviews	10%	10%	10%		
A3	Average number of employees who require onboarding	A1*A2	330	330	330		
A4	Average onboarding duration pre- Meta Quest (days)	Composite	12	12	12		
A5	Reduction in onboarding duration with Meta Quest	Interviews	25%	25%	25%		
A6	Avoided onboarding time with Meta Quest (days)	A4*A5	3	3	3		
A7	Onboarding cost per user per day (training and opportunity cost)	Interviews	\$900	\$900	\$900		
A8	Avoided onboarding cost per user	A6*A7	\$2,700	\$2,700	\$2,700		
At	Accelerated user onboarding	A3*A8	\$891,000	\$891,000	\$891,000		
	Risk adjustment	↓ 20%					
Atr	Accelerated user onboarding (riskadjusted)		\$712,800	\$712,800	\$712,800		
	Three-year total: \$2,138,400 Three-year present value: \$1,772,628						

#### IMPROVED TASK WORKER TRAINING EFFICIENCY

**Evidence and data.** Across all industries, interviewees noted that task workers or more technical staff (e.g., service technicians, healthcare workers) at their organizations have ongoing training requirements not limited to training on new products, processes, hardware or software, obtaining and renewing certifications and licenses, etc. Prior to Meta Quest, these more technical training endeavors often required one-to-many training models, which inherently drove training efficiency down on a per-user basis while bottlenecking the amount of time each user could spend on task. Interviewees noted that by moving some or all of this training to Meta Quest, task workers train more efficiently, can train on demand, and can train more often than before. This contributes to a culture of organizational knowledge development and retention.

- The XR business development manager in automotive manufacturing said their organization initially deployed Meta Quest to train technicians on the company's newest electric vehicle offering, then expanded the technical training offerings to other technical training tasks and certifications across the company's line of vehicles. The interviewee noted that training time per session also became more efficient on Meta Quest, explaining that some training sessions that used to take up to 8 hours could now be done in around 2 hours, which saves time for both trainers and learners.
- The director of academic and innovative technologies in healthcare explained that their organization's Meta Quest training scenarios are designed to provide transcripts of learners' experiences, allowing them to modify or iterate on these scenarios to improve their effectiveness or innovate on other potentially helpful scenarios based on what learners need next. This increased both the time efficiency and overall effectiveness of the training: "There's just endless amounts of information we can gather individually on our learners and then focus the next training scenarios and virtual experiences to be absolutely tailored to what they need."

**Modeling and assumptions.** For the composite organization, Forrester makes the following assumptions:

- Of the composite organization's 1,650 task workers who train on Meta Quest, an average of 40% across all roles require training on an annual basis.
- For each task worker who requires training annually, the annual training program
  consists of four training sessions of 8 hours each for an annual training requirement of
  32 hours. This is a conservative assumption for the composite averaged across all
  users, roles, and training requirements.

- The average time in training is reduced by 75% per user with Meta Quest given flexibility in training location, training timing, and time spent on-task.
- The average burdened hourly rate for a task worker is \$44 (averaged across all roles for users training on Meta Quest).
- The composite organization has a 50% productivity recapture rate, as it is assumed not all reclaimed time will be repurposed to value-adding tasks.

**Risks.** This benefit will vary among organizations based on:

- The organization's industry and users as it relates to ongoing training complexity, length, and requirements.
- The sophistication of the organization's pre-Meta Quest training program(s) for task workers, as it relates to the potential for improvements with Meta Quest.
- The geographic distribution of the organization's users who require training, as it relates to the training flexibility increase available with Meta Quest.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$737,000.

Average training time each task worker reclaims annually

# 24 Hours

"We're using Meta Quest to train our technicians on many tasks related our trucks, including our new electric truck. Our [VR] training portfolio has increased a lot, as has the number of trainees that we're able to train. Especially if you compare the costs and time commitment that a face-to-face [training session] requires compared with a virtual session."

XR BUSINESS DEVELOPMENT MANAGER, AUTOMOTIVE MANUFACTURING

lmpr	Improved Task Worker Training Efficiency								
Ref.	Metric	Source	Year 1	Year 2	Year 3				
B1	Total task workers requiring training	Composite	1,650	1,650	1,650				
B2	Percentage of user base who require training or re-training	Interviews	40%	40%	40%				
В3	Task workers trained with Meta Quest	B1*B2	660	660	660				
B4	Average training sessions (across all roles)	Interviews	4	4	4				
B5	Average training session duration (including travel time) pre-Meta Quest (hours)	Interviews	8	8	8				
В6	Average training time per task worker (hours)	B4*B5	32	32	32				
B7	Reduction in training time with Meta Quest	Interviews	75%	75%	75%				
B8	Reclaimed training time per user (hours)	B6*B7	24	24	24				
В9	Average burdened hourly rate for a technical user	Composite	\$44	\$44	\$44				
B10	Productivity recapture	TEI methodology	50%	50%	50%				
Bt	Improved task worker training efficiency	B3*B8*B9*B10	\$348,480	\$348,480	\$348,480				
	Risk adjustment	↓ 15%							
Btr	Improved task worker training efficiency (risk-adjusted)		\$296,208	\$296,208	\$296,208				
	Three-year total: \$888,624 Three-year present value: \$736,625								

### IMPROVED GENERAL USER TRAINING EFFICIENCY

**Evidence and data.** Interviewees explained to Forrester that task personnel are not the only ones training with Meta Quest at their organizations. Users in customer-facing roles, service roles, and students (within the education field) also train on Meta Quest to reduce the aforementioned barriers associated with one-to-many learning while deepening the level of engagement with the content.

• The XR business development manager at the automotive manufacturer noted that given the efficiency Meta Quest training delivers to users, their organization's use cases

have expanded beyond technical training into offerings for other users at the company. For example, dealers on the commercial side of the business receive training to better understand the company's product offerings to assist with selling them, while various soft-skills training sessions are available for general users. The interviewee explained that their organization's expanded Meta Quest training use cases to sales personnel at the dealerships aimed to give these users insight into the technical nuances of their vehicles so they're more confident when speaking to customers about these subjects that would normally be outside their comfort levels.

• Interviewees said their organizations saved a significant amount of time for many users by using on-demand user training on Meta Quest, as trainees could complete hand-on training on their own schedules without the downtime associated with group settings or one-to-many learning. The president of innovation at the healthcare organization noted: "We needed a solution that would allow our learners to go into the virtual learning space independently. Several of the other vendors out there require trainers to unlock the training for the user to begin this scenario. On Meta Quest, our learners can go in and practice as much as they want whenever they want."

**Modeling and assumptions.** For the composite organization, Forrester makes the following assumptions:

- Of the organization's 1,650 general users, 75% require training on Meta Quest annually (e.g., non-task worker activities not limited to product training or demonstrations, classroom learning, etc.)
- For each general user who requires training annually, the annual training requirement consists of two training sessions of 8 hours each for an annual training requirement of 16 hours averaged across all users, roles, and training requirements.
- With Meta Quest, the composite reduces the average time in training for users by 50% due to the flexibility in training location, training timing, and time spent on-task per user.
- The average burdened hourly rate for a task worker is \$52 (averaged across all roles for users training on Meta Quest).
- The composite organization has a 50% productivity recapture rate, as it is assumed not all reclaimed time will be repurposed to value-adding tasks.

**Risks.** This benefit will vary among organizations based on:

 The organization's industry and users as it relates to the number of general users who require training on an ongoing basis.

- The sophistication of the organization's pre-Meta Quest training program(s) for general users, as it relates to the potential for improvements with Meta Quest.
- The geographic distribution of the organization's users who require training, as it relates to the training flexibility increase provided by Meta Quest.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$576,000.

Training duration reduction for general users with Meta Quest 50%

"On the commercial side, we have training to help our salespeople understand electrical trucks or liquid natural gas trucks with a more complicated value proposition, so they feel more confident when they meet the customer to sell them."

XR BUSINESS DEVELOPMENT MANAGER, AUTOMOTIVE MANUFACTURING

"We need to be always thinking about what our students are going to need in the future. If they're going to be taking online classes in the future, it's not going to be unusual for them to be using VR and learning in this way. Teachers tell us that Meta Quest has significantly increased student engagement and interest in various subjects. It's really making learning more interactive."

VICE PRESIDENT OF ACADEMICS AND STRATEGIC INITIATIVES, EDUCATION

lmpr	Improved General User Training Efficiency								
Ref.	Metric	Source	Year 1	Year 2	Year 3				
C1	Total general users who require training	Composite	1,650	1,650	1,650				
C2	Percentage of users who require training (e.g., product training, demonstrations, etc.)	Interviews	75%	75%	75%				
C3	General users who train with Meta Quest (rounded)	C1*C2	1,238	1,238	1,238				
C4	Average training sessions (across all roles)	Composite	2	2	2				
C5	Average training session duration (hours)	Composite	8	8	8				
C6	Average training time per general user (hours)	C4*C5	16	16	16				
C7	Acceleration in training with Meta Quest	Interviews	50%	50%	50%				
C8	Reclaimed training time per user (hours)	C6*C7	8	8	8				
C9	Averaged burdened hourly rate for a general user	Composite	\$52	\$52	\$52				
C10	Productivity recapture	TEI methodology	50%	50%	50%				
Ct	Improved general user training efficiency	C3*C8*C9*C10	\$257,504	\$257,504	\$257,504				
	Risk adjustment	↓ 10%							
Ctr	Improved general user training efficiency (risk-adjusted)		\$231,754	\$231,754	\$231,754				
	Three-year total: \$695,261 Three-year present value: \$576,337								

### SAVINGS ON TRAINING-RELATED TRAVEL EXPENSES

**Evidence and data.** Interviewees explained that by eliminating the physical requirements often associated with technical or one-to-many training with Meta Quest, some of all of the previously required in-person training could be shifted over to virtual or even on-demand training for their users. This saves the organizations costs on user travel and expenses while greatly improving training flexibility with respect to timing and location.

The XR business development manager at the automotive manufacturer said that by moving a significant portion of both technical and commercial user training to Meta Quest, their organization avoids travel costs for several hundred trainers from around the globe who need to

travel to its European headquarters annually: "In addition to decreasing the training time [per session] by a lot, we saved on the travel costs: hotels, dinners, and everything else. So, it was a huge difference in cost compared to before, when we only conducted this hands-on training face-to-face. Before Meta Quest, we couldn't do this training virtually."

**Modeling and assumptions.** For the composite organization, Forrester makes the following assumptions:

- Of the 3,300 users trained on Meta Quest annually, 20% (660 users) require in-person training.
- Each user who requires annual in-person training typically attends two training sessions that each last three business days.
- With Meta Quest, the composite avoids 50% of the in-person training sessions with VR training. This is a conservative assumption.
- The composite's average travel and expense cost per user per day is \$400.

Risks. This benefit will vary among organizations based on:

- The number of users who are trained in-person annually.
- The complexity and frequency of in-person training, as it relates to the time spent traveling for training per user.
- Whether the organization fully shifts to virtual training on Meta Quest, as it relates to any
  expenses associated with in-person training.
- An organization's location and region of operations, as it relates to average travel and expense costs per user.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$1.6 million.

Reduction in in-person training requiring travel and expense costs

50%

"Before we had Meta Quest, we invited all the technical trainers to Europe from all over the globe. You can imagine what that costs."

XR BUSINESS DEVELOPMENT MANAGER, AUTOMOTIVE MANUFACTURING

Savi	Savings On Training-Related Travel Expenses									
Ref.	Metric	Source	Year 1	Year 2	Year 3					
D1	Users trained with Meta Quest	Composite	3,300	3,300	3,300					
D2	Percentage of employees required to travel for training	Composite	20%	20%	20%					
D3	Employees required to travel for training	D1*D2	660	660	660					
D4	Average in-person training sessions	Interviews	2	2	2					
D5	In-person training sessions avoidable with Meta Quest	Interviews	50%	50%	50%					
D6	Avoided training sessions that require travel	D4*D5	1	1	1					
D7	Average training session duration (days)	Interviews	3	3	3					
D8	Average cost per travel day per user	Interviews	\$400	\$400	\$400					
Dt	Savings on training-related travel expenses	D3*D6*D7*D8	\$792,000	\$792,000	\$792,000					
	Risk adjustment	↓ 20%								
Dtr	Savings on training-related travel expenses (risk-adjusted)		\$633,600	\$633,600	\$633,600					
	Three-year total: \$1,900,800 Three-year present value: \$1,575,669									

### **SAVINGS ON OPERATIONAL EXPENSES**

**Evidence and data.** In addition to travel and expenses avoidable for in-person training sessions with Meta Quest, interviewees spoke to the ability to reduce or eliminate the effort and expenses associated with in-person training logistics and session development.

- The president of innovation at the healthcare organization said complexity in setting up proper healthcare simulation environments meant the organization was required to establish training hubs and bring students together in-person for onsite training: "At each hub, we would set up a skills lab and a simulation lab. But, at many of our spaces, we were limited to what we were given, so we had limitations in that regard."
  - By shifting training to Meta Quest, the organization standardized healthcare training across more students than before without location and space affecting the quality of the education. Each hub previously cost the organization an estimated \$30,000 to \$50,000 per session. The interviewee said: "Our partnership with Meta has allowed us to not only continue the progression of the learners in our field, but it also ultimately transformed the way that we conduct nursing education. Now a single learner with internet access can access these [healthcare training] scenarios from anywhere in the world. That allowed us to change our learning model. We no longer have hubs because we discovered we didn't need them anymore, which is a huge cost savings."
- Given the equipment required to train both customers and internal personnel, interviewees from the heavy equipment manufacturing organization said it was very difficult to scale training in a cost-effective way, noting that trainers were driving to different sites and training only three to 10 users at a time. Because of this, they were inherently limited not only in the frequency of trainings they could provide, but in the types of training sessions they could develop. One interviewee from the organization said, "It used to be more of a handover process than anything else."

**Modeling and assumptions.** For the composite organization, Forrester makes the following assumptions:

- With Meta Quest, the composite avoids four in-person training sessions annually.
- Each avoided training session eliminates the need for a venue rental, which costs an average of \$450 per hour. Each session includes an average of 32 hours of venue rental.
- Ten training FTEs spend an average of 72 hours each on training development, preparation, and participation per session.
- The burdened average hourly rate for a training FTE is \$44.

**Risks.** This benefit will vary among organizations based on:

The number of in-person training sessions conducted annually.

• The complexity and frequency of in-person training, as it relates to venue costs and FTE time spent developing and conducting the training.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$200,000.

"The number one opportunity we've talked about [internally] is that Meta Quest allows us to scale. We have no worries now about how many learners we can enroll at any given time because we are on this technology."

DIRECTOR OF ACADEMIC AND INNOVATIVE TECHNOLOGIES, HEALTHCARE

Savi	Savings On Operational Expenses								
Ref.	Metric	Source	Year 1	Year 2	Year 3				
E1	Average avoided in-person partner/customer training sessions	Interviews	4	4	4				
E2	Average training session duration (hours)	(D7*8 hours)+8 hours setup and breakdown	32	32	32				
E3	Average hourly venue rental rate and general expenses	Composite	\$450	\$450	\$450				
E4	Subtotal: Cost of training venue	E1*E2*E3	\$57,600	\$57,600	\$57,600				
E5	FTEs dedicated to training hosting and development	Composite	10	10	10				
E6	Time spent on external training development and hosting (hours)	E2+40 hours for development	72	72	72				
E7	Average hourly rate for a training FTE	Composite	\$44	\$44	\$44				
E8	Subtotal: Internal training development and hosting personnel costs	E5*E6*E7	\$31,680	\$31,680	\$31,680				
Et	Savings on operational expenses	E4+E8	\$89,280	\$89,280	\$89,280				
	Risk adjustment	↓ 10%							
Etr	Savings on operational expenses (risk-adjusted)		\$80,352	\$80,352	\$80,352				
	Three-year total: \$241,056		Three-year pres	ent value: \$199,82	4				

### IMPROVED BUSINESS PROFITABILITY

**Evidence and data.** Several interviewees provided examples of how adopting Meta Quest directly contributed to their organization's ability to generate additional revenue or business opportunities, iterate on products or services, scale beyond what was previously possible, and retain more customer wallet share. In addition, some interviewees noted that their organization trained (or monetized training) its own customers using Meta Quest, which improved customer experience and may ultimately impact retention. Beyond the examples from the interviewees, Forrester research indicates that VR training may impact profitability in additional ways, including error reduction, more user uptime, fewer safety violations, and the savings inherent to operating training at a larger scale.<sup>2</sup>

- The president of innovation in healthcare said Meta Quest allowed the organization to go fully virtual with its pre-clinical scenario training offerings. This eliminated the costs and requirements associated with in-person training while greatly increasing the number of students that can enroll, scaling from around 1,500 learners to more than 7,000 in a couple of years. The interviewee said: "Our relationship with Meta has transformed the way that we do business. It has transformed the way that we can offer curriculum as an online institution."
- Interviewees from the heavy equipment manufacturing organization said their company leveraged Meta Quest to launch a training product for end customers to train operators to use its cranes, which drove a significant amount of recurring subscription revenue for training programs. The same interviewee shared an example where one of the company's largest US-based customers signed on for an additional \$400,000 annually for its training program, increasing the value of the customer while inherently making the organizations products "stickier" in the account since end users are training on them exclusively. The interviewee summarized: "While it hasn't increased the amount of equipment we've sold, our customers training them with Meta Quest improves the longevity of our relationships. There is no question now that switching away from our offerings would now take much more change since we're so ingrained in their processes as a full-service provider, rather than as just an equipment provider."
- The XR business development manager at in automotive manufacturing said their organization uses Meta Quest to provide a VR experience to end customers in markets where the company may not have enough physical vehicles available to demonstrate. The interviewee explained: "At our latest [vehicle] launch activity, we used Meta Quest and a VR application to provide virtual [vehicles] to markets that don't have a real one.

We used this application for over 2,000 customers at [our HQ] and also at regional events in the different markets. We used the application to let customers fully experience the vehicle, which was a game-changer because, before this use case, we'd only used Meta Quest for our internal technicians and dealers. This was the first time that we used it for customers, which is very important for the brand message that it sends. So, this is another way VR and Meta Quest is creating value for us."

**Modeling and assumptions.** For the composite organization, Forrester makes the following assumptions:

- Based on opportunities made possible by Meta Quest, the composite organization improves revenue by 1.25%. This is a conservative assumption.
- The composite has a 5% operating profit margin. Forrester calculated this benefit in terms of profit rather than revenue.

**Risks.** This benefit will vary among organizations based on:

- The organization's industry or business, as it relates to the ability to drive additional product, service, scaling, or training opportunities on Meta Quest.
- The size of the organization's Meta Quest deployment, as it relates to the overall impact on total revenue and profitability.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$1.2 million.

Revenue increase with Meta Quest-enabled opportunities

1.25%

"With Meta Quest-based training, we're training our customers and becoming part of their onboarding process. We're not just a partner on the equipment level, but also a partner for their new-hire process. This is extremely powerful, not just for driving revenue, but also for building strong partnerships with our customers and becoming a complete solution provider for them. We understand their needs on a much more fundamental level."

PRODUCT OWNER, DIGITAL TRAINING SERVICES, HEAVY EQUIPMENT MANUFACTURING

Impr	Improved Business Profitability									
Ref.	Metric	Source	Year 1	Year 2	Year 3					
F1	Revenue	Composite	\$1,000,000,000	\$1,000,000,000	\$1,000,000,00 0					
F2	Revenue improvement attributable to Meta Quest customer retention	Interviews	1.25%	1.25%	1.25%					
F3	Revenue improvement	F1*F2	\$12,500,000	\$12,500,000	\$12,500,000					
F4	Operating profit margin	Composite	5%	5%	5%					
Ft	Improved business profitability	F3*F4	\$625,000	\$625,000	\$625,000					
	Risk adjustment	↓ 20%								
Ftr	Improved business profitability (risk-adjusted)		\$500,000	\$500,000	\$500,000					
	Three-year total: \$1,500,000	Three-year p	resent value: \$1,243	3,426						

### **UNQUANTIFIED BENEFITS**

Interviewees mentioned the following additional benefits that their organizations experienced but were not able to quantify:

- **Improved customer experience.** Several interviewees highlighted ways in which training on Meta Quest resulted in better customer experience delivery, potentially resulting in additional business or client retention.
- Interviewees said setting up VR training on Meta Quest inherently makes learning more efficient for users by providing more time on-task, less downtime, and access to ondemand training while the interactivity and social components of the training make the learning experience more engaging. Interviewees noted this combination of training frequency and increased engagement contributes to an organizational learning and development culture of increased knowledge retention and demand for training. The XR business development manager at the automotive manufacturer summarized: "We think training with Meta Quest is more effective than face-to-face in a lot of different situations, especially in the ability to visualize the invisible. For example, in VR, you can visualize exactly how the electric circuits are working. You can see how the air flow is working, how the coolant system is working, how the lubricating system is working, and so on. You can see into the system to understand. As a result, the retention of knowledge is higher even than if you have face-to-face training because you have a view into how everything is working together."
- Improved safety and feasibility for complex training environments. Interviewees explained that by moving would-be real-life training environments in potentially hazardous or consequential situations to virtual environments on Meta Quest, learners across industries can practice more frequently in safe VR environments that may not be safe or realistic to set up otherwise. The XR business development manager at the automotive manufacturer said one use case for Meta Quest is training technicians to work on high-voltage electric trucks, which is a potentially dangerous training situation.
- End-user support from Meta. Interviewees noted that support from Meta at both the organizational and individual user level consistently delivers. The director of academic and innovative technologies at the healthcare organization summarized: "We meet with Meta regularly depending on our needs. We have an account manager who's been exceptionally helpful and has helped us break down barriers. Any technical problems that our learners face go directly to Meta support. We've troubleshooted everything from pass-through to trying to understand the learner experience all the way to using Meta's First Steps game as part of our curriculum to help ensure learners get the very best experience when they receive their headsets."

"We do believe that the immersive environments in Meta Quest allow our learners to better gather and retain the information they need to learn from the experience."

DIRECTOR OF ACADEMIC AND INNOVATIVE TECHNOLOGIES, HEALTHCARE

### **FLEXIBILITY**

The value of flexibility is unique to each customer. There are multiple scenarios in which a customer might implement Quest and later realize additional uses and business opportunities, including:

- Preparing users for the training techniques of tomorrow. Several interviewees
  explained that Meta Quest allows their organizations to meet the expectations of the
  next generation of trainees while continued innovation on training with Meta Quest will
  position them to continue to meet these expectations in the future. In addition,
  interviewees noted that users or students who train on Meta Quest are also inherently
  positioning themselves to be more adaptable to future technologies, VR opportunities, or
  training in the future, which will inherently make these users more valuable to their
  organizations.
- Having access to additional training opportunities with Meta Quest. Beyond the
  training opportunities that currently exist for users on Meta Quest, interviewees are
  optimistic their organizations' partnerships with Meta will ensure a consistent flow of
  training opportunities for their users.

Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in <u>Total Economic Impact Approach</u>).

"Our Meta Quest devices have certainly provided our school and our students with opportunities to deepen their learning while using cutting-edge technology."

VICE PRESIDENT OF ACADEMICS AND STRATEGIC INITIATIVES, EDUCATION

# **Analysis Of Costs**

Quantified cost data as applied to the composite

Total Costs							
Ref.	Cost	Initial	Year 1	Year 2	Year 3	Total	Present Value
Gtr	Meta Quest hardware costs	\$314,995	\$157,498	\$157,498	\$0	\$629,990	\$588,338
Htr	Meta Quest training partner and internal development costs	\$0	\$532,400	\$532,400	\$532,400	\$1,597,200	\$1,324,000
	Total costs (risk- adjusted)	\$314,995	\$689,898	\$689,898	\$532,400	\$2,227,190	\$1,912,338

### **META QUEST HARDWARE COSTS**

**Evidence and data.** Interviewees told Forrester the following about the costs of their organizations' adoption of Meta Quest hardware and the related hardware costs:

- Most of the organizations launched Meta Quest devices in stages and increased the total number of headsets in phases.
- Some of the organizations eliminated hardware for other VR solutions once Meta Quest was brought in.
- The organizations use Meta Quest 3 and Meta Quest 3S devices.
- Pricing may vary based on the specific Meta Quest device and service bundle. Contact Meta for additional details.

**Modeling and assumptions.** For the composite organization, Forrester makes the following assumptions:

- The composite initially purchases 500 Meta Quest 3 devices.
- It purchases 250 additional Meta Quest 3 devices in Years 1 and 2 of the analysis.
- It purchases the Meta Quest 3 device bundled with two years of Meta Horizon managed services at a cost of \$629.99 per device.

**Risks.** This cost will vary among organizations based on:

- The specific type and number of Meta Quest devices purchased.
- Any service bundling or discounts, which may alter per-device pricing.

**Results.** Because Meta provided the pricing for the composite organization, Forrester did not risk-adjust this cost, yielding a three-year, total PV (discounted at 10%) of \$588,000.

Meta Quest 3 device cost (bundled with two-year Meta Horizon managed services)

\$629.99

Meta	a Quest Hardware Costs					
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3
G1	Headsets	Composite	500	250	250	0
G2	Meta Quest 3 hardware cost (bundled with 2-year Meta Horizon managed services)	Meta	\$629.99	\$629.99	\$629.99	\$629.99
Gt	Meta Quest hardware costs	G1*G2	\$314,995	\$157,498	\$157,498	\$0
	Risk adjustment	0%				
Gtr	Meta Quest hardware costs (risk-adjusted)		\$314,995	\$157,498	\$157,498	\$0
	Three-year total: \$629,990			ee-year present	value: \$588,338	3

# META QUEST TRAINING PARTNER AND INTERNAL DEVELOPMENT COSTS

**Evidence and data.** The interviewees explained to Forrester that their organizations paid external partners and dedicated internal FTE resources to their Meta Quest adoptions, training software, and ongoing developments. These (often industry-specific) partners and personnel resources assisted the organizations on activities such as virtual training development, ongoing training iterations, and change management tasks around user adoption.

**Modeling and assumptions.** For the composite organization, Forrester makes the following assumptions:

- Three internal FTE resources are dedicated to Meta Quest VR training development, iteration, and partner management.
- Each FTE resource spends 60% of their working time on activities related to Meta Quest training development.
- The average burdened annual salary for an FTE dedicated to these activities is \$130,000.
- The composite organization pays a partner organization \$62,500 per quarter to license software and assist with VR training development and iteration.

Risks. This cost will vary among organizations based on:

- Any pre-Meta Quest VR training previously developed, as it relates to net new VR training development costs on Meta Quest.
- The organization's industry, as it relates to any industry-specific training and required paid partner relationships.
- The skill and capacity of the organization's FTE resources who work on VR training development on Meta Quest.

**Results.** To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$1.3 million.

"It's been a surprisingly [efficient] change management journey. We have very positive feedback from our users, and that's a surprise because our main target group is technicians who have been working with in-person trainers for maybe 30 years. They're used to more ordinary tools and training."

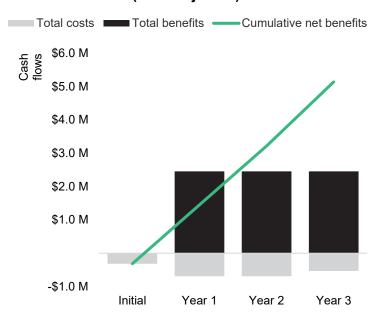
XR BUSINESS DEVELOPMENT MANAGER, AUTOMOTIVE MANUFACTURING

Meta	Meta Quest Training Partner And Internal Development Costs								
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3			
H1	Internal resources who work on ongoing VR training development	Composite		3	3	3			
H2	Average burdened salary for an internal developer	Composite		\$130,000	\$130,000	\$130,000			
Н3	Percentage of time dedicated to Meta Quest development	Interviews		60%	60%	60%			
H4	Subtotal: Internal ongoing development costs for Meta Quest	H1*H2*H3		\$234,000	\$234,000	\$234,000			
H5	Partner development fees	Composite		\$250,000	\$250,000	\$250,000			
Ht	Meta Quest training partner and internal development costs	H4+H5	\$0	\$484,000	\$484,000	\$484,000			
	Risk adjustment	↑10%							
Htr	Meta Quest training partner and internal development costs (riskadjusted)		\$0	\$532,400	\$532,400	\$532,400			
	Three-year total: \$1,597,200			e-year present	value: \$1,324,00	00			

# **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 composite 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)						
	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	(\$314,995)	(\$689,898)	(\$689,989)	(\$532,400)	(#2,227,190)	\$1,912,338
Total benefits	\$0	\$2,454,714	\$2,454,714	\$2,454,714	\$7,364,141	\$6,104,509
Net benefits	(\$314,995)	\$1,764,816	\$1,764,816	\$1,922,314	\$5,136,951	\$4,192,171
ROI						219%
Payback						<6 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."

### 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.

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.

# **APPENDIX B: ENDNOTES**

<sup>&</sup>lt;sup>1</sup> Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists solution providers in communicating their value proposition to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of business and technology initiatives to both senior management and other key stakeholders.

<sup>&</sup>lt;sup>2</sup> Source: The Future Of Extended Reality, Forrester Research, Inc., April 30, 2024.

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