A Forrester Total Economic Impact™
Study Commissioned By MURAL
February 2018

The Total Economic Impact™ Of MURAL

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Project Director:
Dean Davison

ABOUT FORRESTER CONSULTING

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Key Benefits

"Our mission was transformation. We were working to shift the company culture. We found MURAL as a tool is an awesome way to bring whole teams, not just designers, into the work."

~ Joni Saylor, IBM

Total avoided costs for travel and workshop incidentals:
$19.1 million

Total improved productivity of IT organization using MURAL:
$3.8 million

Executive Summary

Design thinking and Agile are changing how companies build products and services to improve the experience of customers. "But the right customer interactions, implemented the right way, don't just happen. They must be actively designed."[1] MURAL's digital platform helps organizations increase both the quality and efficiency of design thinking programs for product design, Agile collaboration, customer support, and nearly every other facet of business operations.

MURAL commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) that enterprises may realize from using MURAL. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of MURAL on their organizations.

To better understand the benefits, costs, and risks associated with MURAL, Forrester interviewed IBM as it has used MURAL for several years in different areas of its enterprise. IBM provides a wide range of technology products and services to companies around the globe and is investing significantly in design thinking programs. The scale of the investment in design thinking may seem daunting, but readers should remember that IBM employs 380,000 people, more than 1,600 design professionals, and more than 100,000 employees have received structured training applying design thinking to their work. It currently employs hundreds of design specialists who are training product managers, engineers, business analysts, developers, and customer support professionals in design thinking. IBM also applies design thinking for customer experience design, for internal operations, and in Agile development and delivery by the IT organization. IBM found that it was able to leverage MURAL to conduct some design thinking sessions virtually.

Prior to adopting MURAL, IBM managed design thinking sessions by getting participants into a conference room for several days, using whiteboards and sticky notes, and utilizing live facilitators. Meghan McGrath told Forrester: "It was hard to get a whole team together, and it usually wouldn't include everyone because of schedules. Some voices are stronger than others in the room. Ideas flow randomly, and it's sometimes hard to keep progressing in a systematic way, especially with teams that are working on design thinking projects for the first time."

Meghan continued: "Using MURAL, the team took a more structured approach during sessions. People 'speak up' more because working online makes everyone equal, nullifies dominant voices, and as a result, we have more ideas put forward. We collect better data because we come up with better questions to ask in the first place. There is more ownership by the team. As a design professional, I'm able to spend more time doing my job rather than explaining what we are trying to achieve. Overall, I believe that **we accomplish much more design thinking work using MURAL**."

Key Findings

Unquantified benefits. During the interviews, IBM shared some benefits that Forrester could not associate with specific financial returns, but enhanced the customer experience. Using MURAL:

ROI
495%

Benefits PV
$23 million

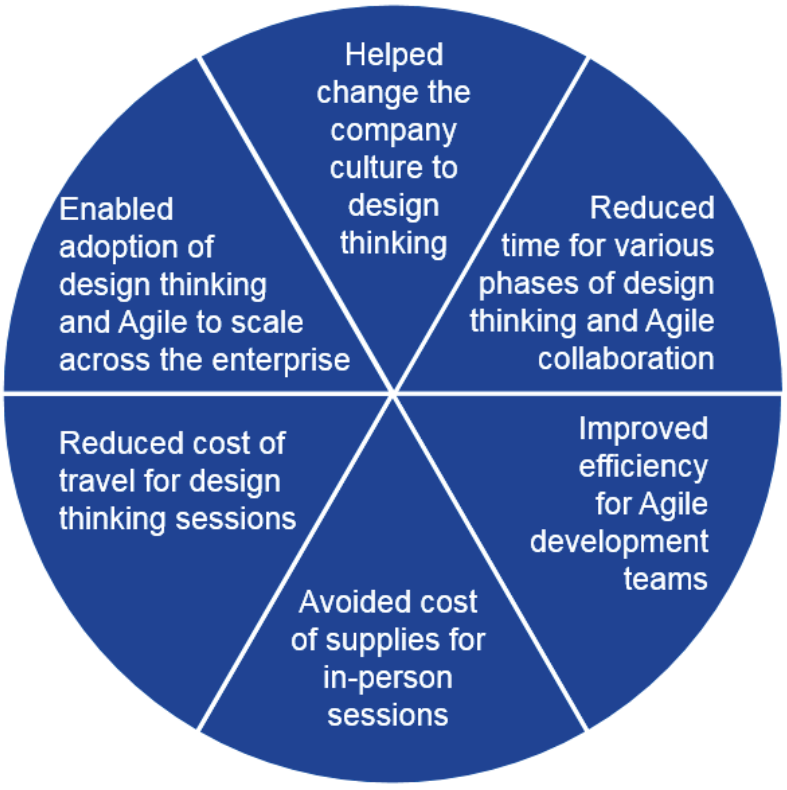
NPV
$19.1 million

Payback
<6 months

- **Helped change the IBM culture to design thinking.** MURAL simplified the process of including more people and in increasing design work, which helped design thinking permeate companywide norms.
- **Enabled adoption of design thinking and Agile to scale across IBM.** Using a digital platform such as MURAL reduced the learning curve for employees to learn and implement design thinking more widely.
- **Reduced time for various phases of design thinking and Agile collaboration.** The organization was able to run design thinking activities more frequently, iterate on projects more quickly, and avoid delays caused by travel or scheduling of busy employees.

Quantified benefits. The following risk-adjusted present value (PV) benefits are representative of those experienced by IBM:

- **Reduced cost of travel for design thinking sessions valued at $16.4 million.** IBM facilitated online sessions, which avoided some travel expenses. On average, two fewer people traveled per session. For an organization conducting thousands of sessions per year, the savings in travel expenses proved profound.
- **Avoided cost of supplies for in-person sessions of $2.7 million.** In addition to travel costs, IBM avoided incidental costs of in-person sessions including sticky notes, poster boards, catering, and occasional costs to rent meeting rooms.
- **Improved efficiency for Agile development teams valued at $3.8 million.** IBM's IT organization also conducted programs around design thinking programs and Agile collaboration. While MURAL was one of several tools and programs leveraged by this team to streamline its Agile delivery, MURAL's impact was distinct by improving the quality and shortening the time-to-realize results.



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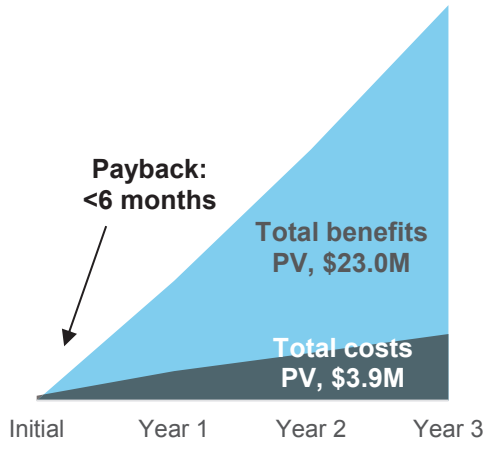
Costs. IBM experienced the following risk-adjusted PV costs:

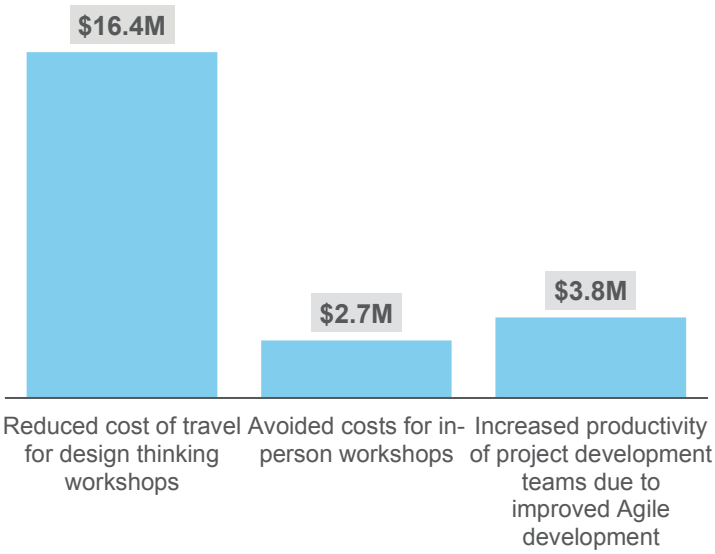
- **Subscription cost for MURAL totaling $2.4 million over three years.** IBM paid license fees for more than 7,000 users by the end of the third year. The number of design professionals exceeded 1,600 individuals. IBM also had an average of 20 users for each design professional. In total, the number of users nearly doubled over the first three years of adoption.
- **Built internal templates and curriculum at a cost of $609,431.** Four employees dedicated a year of effort to building out a custom set of tools and curriculum based around MURAL.
- **Trained hundreds of employees to use MURAL and conduct virtual sessions for select projects at a productivity cost of 879,855.** Design professionals spent several days in formal training and an additional 10 days of productivity to restructure their design facilitation skills to work within the MURAL platform.

Forrester's interview and subsequent financial analysis found that IBM experienced PV benefits of $23 million over three years versus costs of $3.9 million, adding up to a net present value (NPV) of $19.1 million and an ROI of 495%.

Financial Summary



Benefits (Three-Year)



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TEI Framework And Methodology

From the information provided in the interview, Forrester constructed a Total Economic Impact™ (TEI) framework for those organizations considering implementing MURAL.

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 MURAL has on an organization:

The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

DUE DILIGENCE
Interviewed MURAL stakeholders and Forrester analysts to gather data relative to MURAL.

CUSTOMER INTERVIEW
Interviewed IBM design professionals using MURAL to obtain data with respect to costs, benefits, and risks.

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 interviewed organization.

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

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by MURAL 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 report to determine the appropriateness of an investment in MURAL.

MURAL 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.

MURAL provided the IBM contacts for the interviews but did not participate in the interviews.

The MURAL Customer Journey

Objectives Of IBM's Design Thinking Program

The objectives of IBM's design thinking program included the following:

- **Redefine how employees operated and thought.** IBM's leading design executive, Phil Gilbert, said: "The outcome can no longer be defined solely by the capability. It's not about adding design. It's about altering the makeup of our teams to ensure that more disciplines and skill sets are represented. Design thinking brought in the notion of collaboration and the notion that everything we did had to be centered around a human being that is using our product."
- **Shift from product experience to customer experience.** Joni Saylor told Forrester: "Our design thinking activities are focused on real people that use our products and services. We are guided by the questions such as how we engage with the client even outside of their use of our products.
  - "How do they find out about our product?
  - "How do they use it?
  - "How do they get value?
  - "What's it like for them when they get started and when they use it day-to-day?
  - "What are the ways that they can leverage it and extend it across their network?"
- **Modify the skills required to perform product-related tasks.** Mark Marrara said: "Using structured design allowed us to lower the bar so that some job functions didn't require employees with the same technical, engineering background. This made it easier to hire or train people, ramp up more rapidly, and reduce our time-to-market."
- **Ensure that product capabilities lined up with customer needs.** Mark Marrara continued: "What's the loss in revenue if we miss the market? Building capabilities and experiences into our products can take a while to build. Design thinking helps us build the right attributes well in advance of when they are needed in our feature set."

> "Design thinking brought in the notion of collaboration and the notion that everything we did had to be centered around a human being that is using our product."
>
> *Phil Gilbert, IBM*

Key Challenges Before MURAL

When running design thinking programs prior to adopting MURAL, the interviewees told Forrester that:

- **They sought to equalize the voices of all participants.** Joni Saylor said: "The microphone was often dominated by the loudest or most senior person in the room. To succeed as a team, we need everyone to bring their best ideas, but it can be difficult to check team hierarchies at the door."
- **They struggled to get all the key contributors together.** The scheduling challenges of coordinating calendars for all the right people who needed to participate was a challenge, especially for a company that operates globally. Often, scheduling required planning several months in advance to ensure all the critical participants could attend.

> "It was hard to get a whole team together, but it usually wouldn't include everyone because of schedules. Some voices are stronger than others in the room. Ideas flow randomly and it's sometimes hard to keep progressing in a systematic way, especially with teams that are working on design projects for the first time."
>
> *IBM design professional*

- **They incurred expenses for travel, materials, and sometimes facilities.** Every in-person event incurs costs for supplies such as poster boards, sticky notes, markers, food, and sometimes renting meeting rooms for highly confidential meetings or in locations without a company office.
- **Extended, multiday sessions were taxing on people.** Joni Saylor added: "Some of our workshops would last two to three days and be in-person. It can be exhausting. People often need time between conversations to process ideas and think about potential solutions."

Key Results Using MURAL

The interviews revealed that key results from the MURAL investment include:

- **A change in the company culture.** Joni Saylor said: "Our mission was transformation. We were working to shift the company culture. We found MURAL as a tool is an awesome way to bring whole teams, not just designers, into the work."
- **A change in how it conducted design thinking workshops.** Joni Saylor continued: "I am planning a workshop using MURAL for an upcoming half-day session. Rather than having people travel from all over the globe, we are setting it up on MURAL and will have everyone's attention for 4 hours."
- **Shorter design thinking sessions.** Joni Saylor added: "When I'm running a virtual workshop, I try to keep it to 4 hours or less. This requires an extra level of preparedness by participants. The prep and time limit helps us foster very intentional thinking and conversations."
- **Streamlined design thinking workshop timeline and quality.** Phil Gilbert said: "Using MURAL was like night and day for design work. Normally, it's difficult to get everybody with the right expertise from different groups and various countries on the same page and working together in real time. The savings was especially significant at the beginning of a project where we do a lot of building definitions and conceptual thinking."
- **Faster results.** Konrad Lagarde is a design professional within the IT organization and he told Forrester: "We thought that doing cocreation work would be better with everyone sitting in the same room, but that requires time and travel. Using MURAL allowed us to cocreate more quickly and keep our Agile momentum rolling without delays in time or increases in costs. It accelerated the speed of getting to the outcome and getting through the exercise faster than in the past."

> "Using MURAL, the team took a more structured approach during sessions. People 'speak up' more because working online makes everyone equal, nullifies dominant voices, and as a result, we have more ideas put forward. We collect better data because we come up with better questions to ask in the first place. There is more ownership by the team. As a design professional, I'm able to spend more time doing my job rather than explaining what we are trying to achieve. Overall, I believe that we accomplish about four times the amount of design work using MURAL."
>
> *Meghan McGrath, IBM*

Benefits Analysis

Total Benefits

REF.	BENEFIT	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Atr	Reduced cost of travel for design thinking workshops	$5,508,000	$6,609,600	$7,925,400	$20,043,000	$16,424,222
Btr	Avoided costs for in-person workshops	$918,000	$1,101,600	$1,320,900	$3,340,500	$2,737,370
Ctr	Increased productivity of project development teams due to improved Agile development	$1,282,500	$1,539,000	$1,843,000	$4,664,500	$3,822,483
	Total benefits (risk-adjusted)	$7,708,500	$9,250,200	$11,089,300	$28,048,000	$22,984,076

Reduced Cost Of Travel For Design Thinking Workshops

Using MURAL enabled professionals to conduct a number of design thinking workshops virtually rather than in person. Changes included:

- Divided up workshop time into segments.
- Assigned “prework” to participants.
- Avoided having all participants travel to a single location.

On average, two participants avoided $1,200 in travel costs to attend each workshop. Given the scale of the interviewed customer and that it runs thousands of workshops each year, the savings over three years totaled more than $19.3 million.

Because readers will likely experience a wide range in avoided travel costs per workshop, Forrester risk-adjusted the benefit down by 15%, resulting in a three-year risk-adjusted total PV of $16.4 million.

The table above shows the total of all benefits across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, IBM expects risk-adjusted total benefits to have a PV of nearly $23 million.

Reduced Cost Of Travel For Design Thinking Workshops: Calculation Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
A1	Number of design professionals (represents only part of IBM design programs)	Initial value of 150 growing at 20% per year	180	216	259
A2	Average number of workshops conducted per design professional per year		15	15	15
A3	Average number of participants per workshop who avoided travel costs		2	2	2
A4	Average travel cost per participant		$1,200	$1,200	$1,200
At	Reduced cost of travel for design thinking workshops	A1*A2*A3*A4	$6,480,000	$7,776,000	$9,324,000
	Risk adjustment	↓15%			
Atr	Reduced cost of travel for design thinking workshops (risk-adjusted)		$5,508,000	$6,609,600	$7,925,400

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Avoided Costs For In-Person Workshops

In addition to avoiding travel costs, IBM did not require basic supplies such as sticky notes, poster boards, and catered meals that would normally be part of a multiday, face-to-face workshop. The costs included in Forrester's financial model include:

- Miscellaneous office supplies amounting to $100 per workshop.
- Catering amounting to $300 per workshop.

While the cost per workshop is minor, for an organization the size of IBM that is conducting thousands of workshops each year, the costs multiply into millions of dollars. Over three years, the total of avoided incidental costs reached nearly $3.2 million.

Because the circumstances and hosting costs incurred by readers will vary widely, Forrester risk-adjusted this benefit downward by a higher value of 15%, yielding a three-year risk-adjusted total PV of $2.7 million.

Implementation risk is the risk that a proposed investment may deviate from the original or expected requirements, resulting in higher costs than anticipated. The greater the uncertainty, the wider the potential range of outcomes for cost estimates.

Avoided Costs For In-Person Workshops: Calculation Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
B1	Number of workshops per year	A1*A2	2,700	3,240	3,885
B2	Avoided cost of supplies	B1*$100	$270,000	$324,000	$388,500
B3	Avoided cost of food/catering	B1*$300	$810,000	$972,000	$1,165,500
Bt	Avoided costs for in-person workshops	B2+B3	$1,080,000	$1,296,000	$1,554,000
	Risk adjustment	↓15%			
Btr	Avoided costs for in-person workshops (risk-adjusted)		$918,000	$1,101,600	$1,320,900

Increased Productivity Of Project Development Teams Due To Improved Agile Development

IBM's IT organization used MURAL to improve the speed of:

- **Overhauling its Agile development processes.** It used cocreation with the business units to improve the impact of development efforts, and MURAL enabled a more rapid pace as it avoided time delays by coordinating participant schedules.
- **Improving the speed of reengineering processes and realizing results.** IBM's IT organization was able to bring together teams more quickly to conduct activities. One specific area mentioned in the interview was post-mortems and root-cause analysis, where the organization was able to reduce its average time-to-resolution by 50%.

Most IT organizations struggle with process and collaboration and should be able to realize similar benefits. As such, Forrester risk-adjusted this benefit downward by only 5%, yielding a three-year risk-adjusted total PV of $3.8 million.

Impact risk is the risk that the business or technology needs of the organization may not be met by the investment, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for benefit estimates.

Increased Productivity Of Project Development Teams Due To Improved Agile Development: Calculation					
REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
C1	Number of IT employees affected		4,500	5,400	6,480
C2	Time dedicated to problem solving, root-cause analysis, and Agile development		20%	20%	20%
C3	Improved efficiency using design thinking		30%	30%	30%
C4	Impact of MURAL on design efficiency		5%	5%	5%
C5	FTEs avoided hiring	C1*C2*C3*C4	13.5	16.2	19.4
C6	Average burdened salary		$100,000	$100,000	$100,000
Ct	Increased productivity of project development teams due to improved Agile development	C5*C6	$1,350,000	$1,620,000	$1,940,000
	Risk adjustment	↓5%			
Ctr	Increased productivity of project development teams due to improved Agile development		**$1,282,500**	**$1,539,000**	**$1,843,000**

Unquantified Benefits — Design Thinking And Agile Culture Change

In addition to the benefits outlined above, IBM executives shared other benefits that did not have specific financial implications. Specifically, MURAL helped IBM by:

- **Focusing and measuring customer experience using Net Promoter Score (NPS).**[2] Phil Gilbert told Forrester: "We believe that we are at the cusp of fundamental shift in product innovation. The entire mindset change of how to build products is a phenomenal achievement. Forget the products, forget the revenue, and anything else; just the fact that we are totally driven by customer experience will change our company in the coming years."
- **Enabling adoption of design thinking and Agile to scale across the enterprise.** Phil Gilbert added: "The potential scale [of design thinking] is immense because it can affect almost anything we're doing. In fact, we also had gradual propagation of this approach into many of our internal teams, including HR and the CIO office." Using MURAL helped IBM increase adoption of design thinking throughout the enterprise.
- **Changing the company culture to design thinking.** Joni Saylor told Forrester: "Our mission was transformation. We were working to shift the company culture. We found MURAL as a tool is an awesome way to bring whole teams, not just designers, into the work."

Unquantified Benefits — Flexibility

The value of flexibility is clearly unique to each customer, and the measure of its value varies from organization to organization. There are multiple scenarios in which a customer might choose to adopt MURAL and later realize additional uses and business opportunities, including:

- **Reduced time for various phases of design thinking and Agile collaboration.** Nearly every professional that Forrester interviewed talked about reducing time. Some discussed the challenge of getting busy executives together in a room while others mentioned the ability to iterate faster due to shorter, more rapid sessions. Konrad Lagarde for IBM's IT organization said, "Using MURAL, we were able to bring diverse teams together more quickly and reduce the time required to conduct post-mortem review by half."
- **Improved the speed of iterating on product updates.** Phil Gilbert said: "We started adapting NPS as a gauge for the readiness of a product. Product releases used to be staged in years, but releases are much faster. Our method for keeping an eye on quality is to collect data on user satisfaction from beta or prebeta releases. MURAL helps when we need to pull together a group quickly and for some ideation to pivot quickly."

Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in Appendix A).

Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for a future additional investment. This provides an organization with the "right" or the ability to engage in future initiatives but not the obligation to do so.

Cost Analysis

Total Costs

REF.	COST	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Dtr	Subscription fee for MURAL	$0	$846,000	$950,400	$1,087,800	$2,884,200	$2,371,826
Etr	Building templates and curriculum	$357,000	$0	$149,688	$171,329	$678,017	$609,431
Ftr	Training time and redesigning workshop structure	$0	$701,250	$140,250	$168,300	$1,009,800	$879,855
	Total costs (risk-adjusted)	$357,000	$1,547,250	$1,240,338	$1,427,429	$4,572,017	$3,861,112

Subscription Fee For MURAL

IBM paid a license fee per user and the price per member declined as its scale of adoption increased. It began with 200 design professionals, and averaged an additional 20 members for each design professional. The number of design professional and licensed members increased by 20% each year. The cost over three years totaled $2.4 million. Forrester did not risk-adjust this cost.

The table above shows the total of all costs across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, IBM expects risk-adjusted total costs to be a PV of nearly $3.9 million.

License Fee For MURAL: Calculation Table

REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3
D1	Subscription fee for MURAL			$846,000	$950,400	$1,087,800
Dt	Subscription fee for MURAL	=D1		$846,000	$950,400	$1,087,800
	Risk adjustment	0%				
Dtr	Subscription fee for MURAL (risk-adjusted)			$846,000	$950,400	$1,087,800

Building Templates And Curriculum

Konrad Lagarde from IBM's IT organization told Forrester: "We created something called the Agile Academy, which was a set of learning materials with a digital presence. We then taught design professionals and team leaders how to use the materials. This helped them accomplish their team goals, maintain a safe zone for speaking freely (e.g., everyone should share ideas without regard for titles or organizational structure), and leverage the materials, frameworks, and even videos that we provided."

In addition, IBM paid for MURAL professional services to help adapt and publish templates for specific use cases within the company. These custom templates made it easier for all types of professionals (e.g., engineers, developers, and marketers) to effectively use the tool for design thinking programs.

Many organizations will develop templates within MURAL, but most will be smaller than those of IBM. The company assigned four employees for one year to build the curriculum at a total cost of $357,000. Forrester risk-adjusted this cost up by 5%.

Building Templates And Curriculum: Calculation Table

REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3
E1	Perpetual license cost		4			
E2	Annual maintenance		$85,000			
E3	Professional fees for template adaptations	Dt*15% in Year 2 and Year 3			$142,560	$163,170
Et	Building templates and curriculum	(E1*E2)+E3	$340,000		$142,560	$163,170
	Risk adjustment	↑5%				
Etr	Building templates and curriculum (risk-adjusted)		$357,000		$149,688	$171,329

Training Time And Redesigning Workshop Structure

Each of the design professionals within the IBM required two weeks of time to adapt to MURAL. Most attended two to three days of training and then spent about 10 to 12 days revamping their existing design approaches to work within a digital format rather than face-to-face with participants.

Forrester risk-adjusted this benefit up by 10% to account for the various levels of experience and training possessed and required by design professionals.

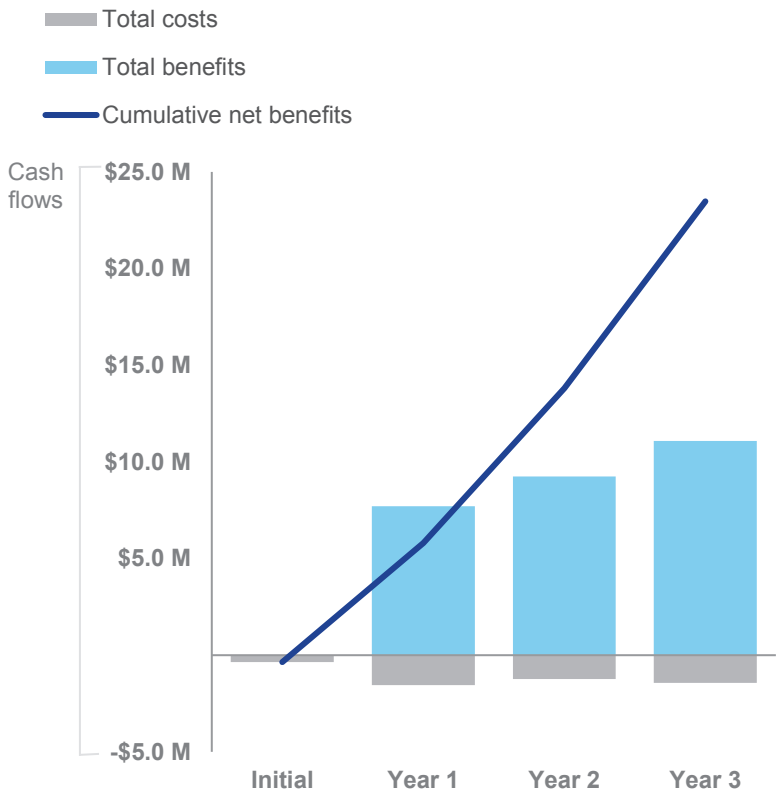
Training Time And Redesigning Workshop Structure: Calculation Table

REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3
F1	Number of design professionals (represents only part of IBM design programs)	Initial value of 150 growing at 20% per year		180	216	259
F2	Design professionals new to MURAL each year	$F1_{CY}$-$F1_{PY}$		180	36	43
F3	Equivalent FTEs of two weeks of time per design professional	F2*(2/48)		7.5	1.5	1.8
F4	Average burdened salary			$85,000	$85,000	$85,000
Ft	Training time and redesigning workshop structure	F3*F4		$637,500	$127,500	$153,000
	Risk adjustment	↑10%				
Ftr	Training time and redesigning workshop structure (risk-adjusted)			$701,250	$140,250	$168,300

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 IBM'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 Table (Risk-Adjusted)

	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Total costs	($357,000)	($1,547,250)	($1,240,338)	($1,427,429)	($4,572,017)	($3,861,112)
Total benefits	$0	$7,708,500	$9,250,200	$11,089,300	$28,048,000	$22,984,076
Net benefits	($357,000)	$6,161,250	$8,009,862	$9,661,872	$23,475,984	$19,122,964
ROI						495%
Payback period						<6 months

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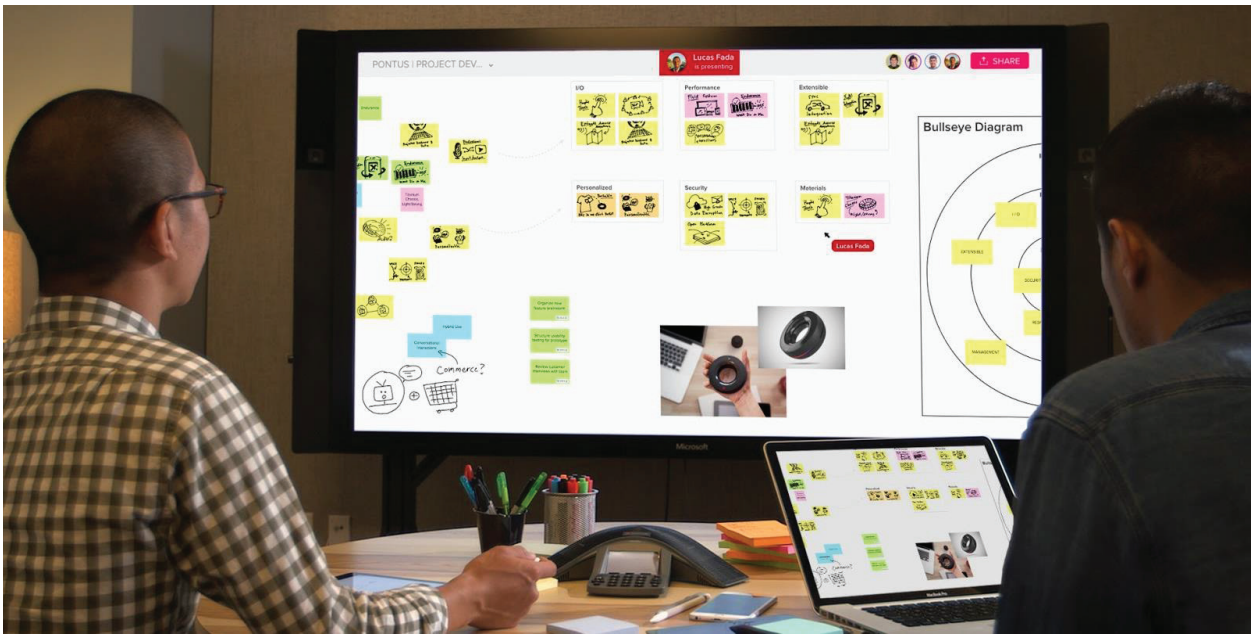
MURAL: Overview

The following information is provided by MURAL. Forrester has not validated any claims and does not endorse MURAL or either of their offerings.

Visual Workspace For Design Thinking And Agile Collaboration

MURAL empowers Imagination Workers to achieve more. MURAL believes that the imminent AI-powered world, imagination, and creativity will be what makes humans thrive in work.

MURAL also believes that innovation can happen anywhere, beyond the physical limitations of meeting rooms, innovation centers, and in-person workshops.



Creative Collaboration Is Difficult, Especially When Global

If you work with a global team in creative problem solving, you've probably experienced these:

- You struggle in getting people together due to travel budget and lack of project rooms.
- Your remote team members feel like second-class citizens when doing a videoconference and not being able to contribute.
- You need to wait for people to travel so that you can work on a topic that needs key stakeholders; as a result, you lose time.
- You skip important steps in your creative process and end up with the wrong outcomes.

Ultimately, you are slow in making the right decisions, and teams are not aligned toward delivering the best solutions, both of which hurt the customer experience.

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Get To Better Ideas, Faster

MURAL enables modern software teams to think and collaborate visually in a simple, playful, and productive way in the cloud. MURAL helps Imagination Workers to understand problems, visualize concepts, and align teams behind solutions.

MURAL workspaces combine:

- Visual thinking canvases to brainstorm, organize, design, and share concepts.
- Tools for live collaboration to align teams and make decisions.
- Meeting orchestrators to run better creative sessions.

HOW TO GET STARTED

You can go to mural.co to start a free trial and experiment with your team.

For enterprise transformations, please contact us at sales@mural.co.

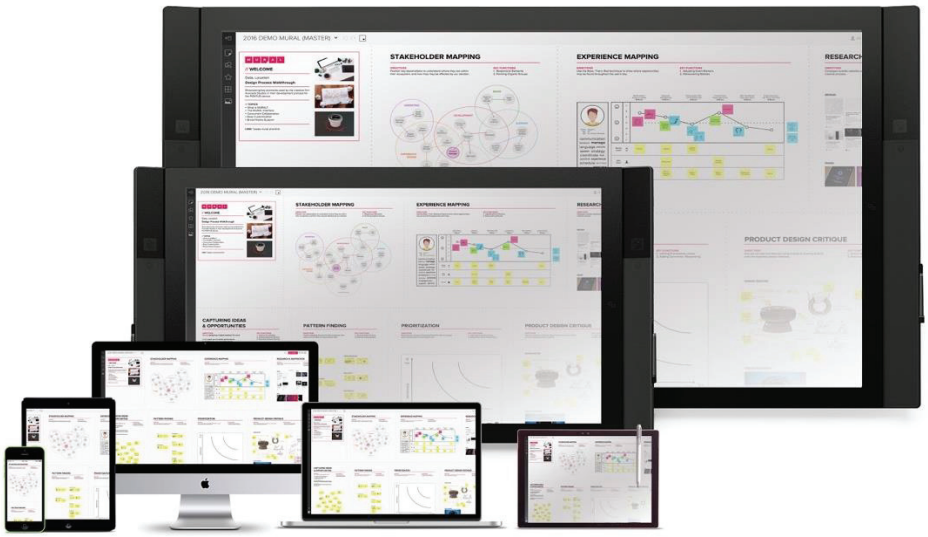
Enterprise Pioneers

Global enterprises like IBM, Intuit, Autodesk and Steelcase accelerate their Design Thinking and Agile transformations by embracing MURAL's solution in the Digital Workplace.

They work with MURAL to enable their Imagination Workers with the right tools, and to train them on best practices to build confidence and productivity while working remotely.

Digital Project Rooms

MURAL for the Microsoft Surface Hub takes the experience to the max and leverages the big touchscreen investments by enabling the rest of the Windows, MacOS, iOS, and Android devices to collaborate natively or via the web.



MURAL's visual workspace complements your favorite chat, video conferencing, issue/task management and file sharing services.

Enterprise-Ready Infrastructure

MURAL's infrastructure has guaranteed uptime and is SOC 2 Type I and Type II-certified — an independent auditor has evaluated the product, infrastructure, and policies and has certified that MURAL complies with its stringent requirements.

Government teams can take advantage of government cloud deployments. European customers can also benefit from geo-fenced cloud deployments.

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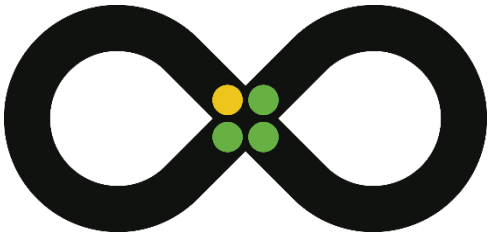
IBM Design Thinking: Overview

The following information is provided by IBM. Forrester has not validated any claims and does not endorse IBM or its offerings.

IBM Design Thinking

At the heart of the IBM approach to human-centered experiences is IBM Design Thinking: a framework to solve users' problems at the speed and scale of the modern digital enterprise. Whether re-envisioning the digital customer experience for a multinational bank or simply planning an upcoming product release, IBM Design Thinking keeps teams focused on what matters to users while guiding them from ideas to outcomes faster and more efficiently.

The Loop



Unlike other design thinking models that segment the different phases into a complex process, IBM Design Thinking is built on the model of a continuous and constant loop of activity. Teams **observe** their users in action, **reflect** and synthesize what they've seen, and quickly **make** a prototype of a better experience. A high-functioning team will always be moving through the loop of observe, reflect, and make. This simplified metaphor has helped teams new to the practice grasp and apply it with early success.

Cross-disciplinary teams engage in a series of collaborative activities such as Empathy Maps and Storyboards to better understand their user and envision the future experience. The low-fidelity artifacts generated during these activities form the narrative thread of their work and enable the team to quickly share ideas with users and stakeholders.

Diverse Empowered Teams

In IBM Design Thinking, the design of the team itself is important to achieving great outcomes, and two important factors are considered: diversity and empowerment. Design thinking teams at IBM must have a diverse composition of expertise, backgrounds, experience levels, gender, race, and age. These teams are equipped with the expertise and authority to deliver outcomes without relying on others for leadership or technical support. By pushing operational decisions down to the lowest level, teams have the ability to achieve rapid iteration as they move through the loop.

The Keys

In order to scale IBM Design Thinking across large geographically distributed teams, a series of tactics, known as The Keys, are applied. **Hills**, **Playbacks**, and **Sponsor Users** help teams align around a common user-centered purpose and maintain that alignment across a complex project. Hills are statements of intent written as meaningful user outcomes. Playbacks bring stakeholders into the loop in a safe space to tell user-focused stories and exchange feedback. Sponsor Users are real-world users that regularly contribute their domain expertise to the project, helping the team stay in touch with real users' real-world needs.

Restless Reinvention

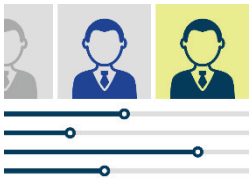
"Everything is a prototype" is a common refrain for IBM Design Thinking teams. A reminder that, by continually iterating through the loop of observe, reflect, and make, they will always be moving toward great outcomes for their users and clients. Learn more about IBM Design Thinking at ibm.com/design/thinking.

Awareness Of IBM's Design Thinking Practice

Respondents were broadly surveyed to learn who they affiliated with design thinking frameworks. IBM was the most cited organization with 52% of the 60 survey respondents associating IBM with design thinking. Further, 36% of respondents engaged directly with IBM to implement design thinking at their own organizations.

36%

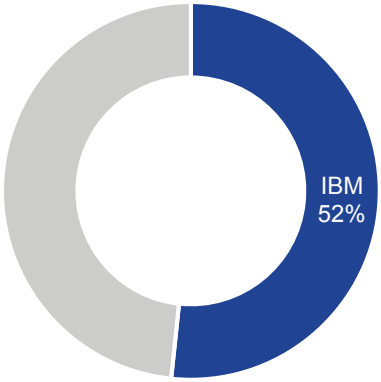
Engaged IBM to implement design thinking at their organization



72%

Use design thinking in most or all teams at their organization

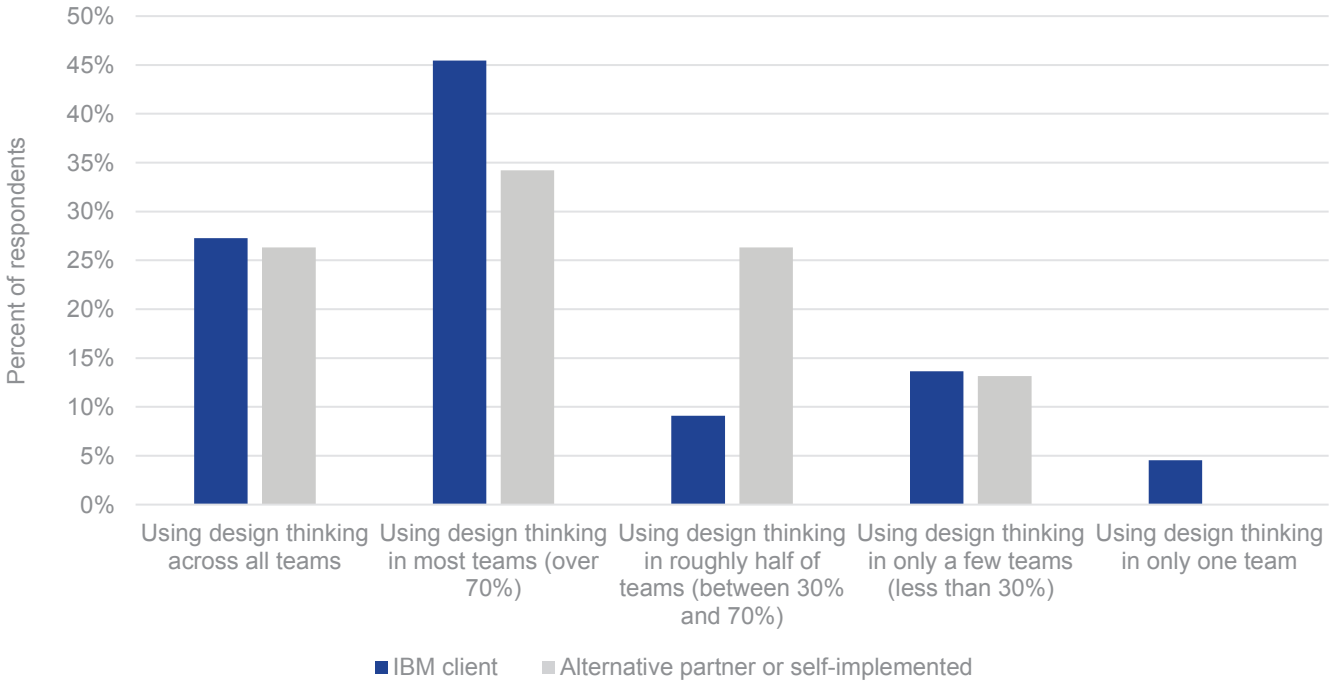
What organizations do you associate with design thinking?



52% of respondents associated IBM with design thinking

Survey respondents who engaged with IBM to support their design thinking efforts reached a higher level of maturity than those who did it themselves or with an alternative partner. Seventy-two percent of IBM's clients utilized design thinking in between 70% to 100% of their teams, whereas only 60% of others reached the same penetration.

Organizational Penetration Of Design Thinking



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Perceptions And Looking To The Future

Survey respondents shared similar understandings of design thinking, albeit with varying jargon. Their perceptions were highly positive, muted only by the challenge of building sustainable adoption within their organizations. It takes significant time and effort, especially without the help of a partner like IBM, to not only introduce design thinking to employees but to embed it to the point that it transforms culture.

- One highly mature respondent shared that, “Design thinking is a core pillar of our organization that we practice daily.”
- Another has had successes, but shared challenges in extending design thinking across the organization, “The culture has not changed, but we are hopeful it will make a difference.” Another shared, “A few ideas have been adopted here and there with minor cultural changes.”

The impacts on how teams work was essential to success, as respondents described:

- “Collaboration has improved markedly” for one, while for another it “streamlines the way we do business to achieve cost efficiencies.”
- Employees were empowered and energized, as one described, “Design thinking establishes much more ambitious goals but gives people the buy-in to accomplish them.”
- Design thinking drove employees to do their best, “It makes people want to involve all stakeholders to develop a more effective product.”
- Standardization of design, architecture, and processes were common achievements, as one respondent explained, “Design thinking enforces consistent behaviors to finding improvements and efficiency across all business lines.”

These organizations are looking to the future with the goal of expanding and deeply embedding the practice of design thinking.

- One respondent shared, “We need to expand the practice deeper into our organization”, while another recognized their current shortcomings, “Our company needs to achieve quantum leaps in fostering creativity.”
- Organizations are turning to design thinking to improve product development, for “new products that leverage collaboration across divisions” and that “match our capabilities and customer needs.”

Overall, respondents are looking to the future to extend initial successes with design thinking into a broad, sustainable practice across their organizations. Success in this initiative requires investment, and where possible, a sophisticated partner to encourage best practices. When looking to a partner, respondents pointed first and foremost to IBM.

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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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Appendix B: Endnotes

[1] Source: “Executive Q&A: Customer Experience Design,” Forrester Research, Inc., June 22, 2012.

[2] Net Promoter and NPS are registered service marks, and Net Promoter Score is a service mark, of Bain & Company, Inc., Satmetrix Systems, Inc., and Fred Reichheld.

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