
Beginning of Customer FAQ's

What is Iris?

Iris is a web-based property portfolio risk management platform that delivers intelligence about natural hazards and climate change and the resulting physical and business impacts to your properties and organization. Each risk metric — life safety, downtime, and economic loss — is the result of an Arup engineer's analysis who has modeled your buildings and will provide you with actionable recommendations to reduce your risks. Iris remains alongside you on your resilience journey, allowing you to stay ahead of your ever-changing risks and track progress as you improve your organization's resilience over time.

Why do I need Iris?

The threat of natural hazards and increased frequency of events due to climate change has elevated the overall risks to organizations, including the physical and business impacts of hurricanes, flooding, earthquakes, wildfire, and sea level rise.

This new reality has placed increasing pressure on organizations to understand and mitigate their vulnerabilities. This is where Iris comes in. The road to resilience is a multi-year journey for organizations as changing hazards (due to climate change) and dynamic portfolios give rise to ever changing threats that require mitigation. Iris responds to the need for organizations to stay ahead of their changing risks by providing insights that can be constantly refreshed. As effective as static reports are to provide a clear snapshot at a single point in time, they are not suited to track dynamic portfolio risks over multiple years. With Iris, organizations can now:

- Access global property risk and resilience data quickly through a "single source of truth"
- Gain insights and action plans from Arup consulting 30% quicker
- Refresh risks as portfolios change and hazards increase to keep up with changing climatic conditions
- Dynamically track progress in risk reduction, including implementation of highly customized mitigation roadmaps developed by Arup engineers and planners that can reduce downtime and losses by up to 90%
- Share their resilience journey with stakeholders to demonstrate the benefits of previous investments (i.e., ROI), helping to protect and increase budget allocations for resilience
- Collect data for climate risks disclosure and reporting (e.g., TCFD), and refresh insights annually to account for evolving climate change scenario.

In the future, Iris will facilitate benchmarking against other similar organizations and offer real-time situational awareness, preparedness, and disaster response management for hazard events

What questions can Iris help me answer?

Iris can help clients answer the following questions:

- How big of a threat are natural hazards and climate change to my organization, campus, city/community?
- Which hazards should I be concerned with and how will this impact my assets, people, and business? How will climate change exacerbate this?

- What's the likelihood and extent/severity of downtime/financial loss that my organization might experience over the next year, next 25 years…? What are the life safety and health risks?
- What is the shared fate risk from a single hazard scenario to my campus, headquarters, city/community?
- What are the largest drivers of loss/risk? Are there specific properties that are disproportionately driving risk? What are the specific components in the building that are most vulnerable?
- What is the breakdown of risks across my portfolio, per hazard? How do individual properties compare against each other?
- Which buildings have had a risk assessment and to which level/class of assessment? Which buildings are next on my list?
- What is in my mitigation backlog? What will the mitigations cost relative to my budget?
- What is the forecasted resilience payback periods and benefit-cost ratios for specific mitigations?
- What is the impact of divesting from or retrofitting a property on my overall portfolio risks?
- How have the risks to each property, my campus, etc. changed over time and what caused the changes?
- How much have I spent on actual mitigations and what has been the realized ROI?
- How close am I to achieving my organization's resilience goals?

What decisions can Iris help me with?

Iris's risk engines unlock valuable insights that fuel action plans and inform key property and operational decisions. These include the following decision points:

- If I have $X million to spend on reducing risk, which physical interventions and operational measures should my organization prioritize?
- How much should my organization invest in resilience measures before there are diminishing returns?
- Is it a good use of my money to invest in this specific mitigation?
- Should I retrofit this building, divest from it, or leave it be?
- Which specific retrofits should I action for this property?
- Given the choice, should I acquire this property or this one?

How is my data secured?

Your data is secure on Iris. The tool features industry leading secure cloud, individual instances, end-to-end TLS encryption, 2FA user authentication, and user-level access control with sensitive data obfuscation.

Who is Iris for?

Iris is for customers that rely on buildings to support their organizations and who need to understand, prioritize, and strategically manage climate change risks to their portfolios. In organizations with dedicated risk and resilience departments, users may include Heads of Business Resilience, VPs of Risk Management, and Chief Resilience Officers. In other organizations where other departments are tapped to champion resilience, customers may include Directors of Sustainability, Directors of Environmental Health and Safety, VPs of Real Estate, Directors of Infrastructure Services, VPs of Finance, as well as C-suite and board members responsible for driving climate resilience.

Their top concerns may be health and safety, downtime and business disruption, economic losses, brand reputation, population displacement, insurance coverage, and protection of invaluable or mission critical assets.

Arup provides risk and resilience consulting to data center operators, real estate developers, university and corporate campuses, technology companies, and government organizations, among others. The organizations may have clustered assets, like a university campus or urban corporate headquarters, or globally distributed real estate portfolios.

What are the consulting services associated with Iris?

The consulting offering often follows a “roadmap to resilience” which supports our clients in understanding their risks, developing mitigation actions, optimizing their investments, and implementing actions through traditional engineering design and retrofit. Arup consultants use Iris to deliver the first three phases in the roadmap to resilience and to track the impacts of implementation on an organization’s resilience.

Roadmap to resilience

1. **Understanding risks**: data collection, hazard assessment, risk assessment
2. **Quantifying risks**: hazard modeling, exposure modeling, vulnerability modeling, quantified risks
3. **Strategizing to mitigate risks**: mitigation options, cost-benefit analysis, prioritized mitigations
4. **Implementing solutions**: design retrofit, revised designs, real estate frameworks

What data and metrics does Iris provide?

Iris provides a range of crucial risk metrics, including:

- Direct financial losses to repair damage or replace building components
- Business interruption and downtime
- Revenue losses associated with downtime
- Inventory losses
- Life safety risks

These can be provided for various scenarios (e.g., 500-year storm event), annual probabilities, or a likelihood and severity over a given time horizon, which is particularly useful for decision-making purposes.

Iris also provides return on investment (ROI) metrics such as resilience payback periods and benefit-cost ratios for mitigations at the asset and portfolio level.

What can the data be used for?

Arup consultants use this information to develop highly customized mitigation strategies that are stored as a mitigation backlog and roadmap within Iris, so that you can keep track of projects to do and risk reduction impacts to your portfolio as the mitigations are implemented.

With this information, Iris will compute the ROI which can be used to demonstrate progress to key stakeholders, helping you to secure budget for further resilience projects.

The risk data can also be used for reporting purposes, including physical climate risk disclosures for the Taskforce on Climate-related Financial Disclosures (TCFD).

What information is needed to model the risks?

Risk is the integration of hazard, exposure, and vulnerability, as described in the IPCC Fifth Assessment Report (AR5).

Hazard describes the probability of a particular site experiencing a certain hazard intensity (e.g., wind speed, flood depth, ground shaking) over a given time period. Climate change impacts can be incorporated to augment the hazard for a particular emissions scenario and time horizon.

Exposure describes the properties that are in the hazardous areas and what's inside of them. This includes the building components which could be damaged as well as the type, quantity, and location, the building contents and inventory, the value of the building and contents, the functions that could be impacted, and the people that could be affected.

Vulnerability describes the expected severity and extent of damage to a building or specific components or contents within the building, given a certain hazard demand parameter (e.g., wind speed). It also describes the expected impacts on building occupants. While the hazard and exposure are parameters that are not easily changed, the vulnerability of a building and its functions can be reduced through design, retrofit and operational measures (i.e., adaptive capacity).

Does the availability of hazard, exposure, and vulnerability information impact the quality of the risk outputs?

Yes. Iris supports varying levels of risk analysis, termed Risk Assessment Classes, with increased accuracy and confidence of the outputs as more site-specific data about the hazard, exposure, and vulnerability is obtained or developed. The classes are described as follows:

- **Class 1:** High level risk screening assessment
- **Class 2:** Basic risk analysis
- **Class 3:** Baseline risk modeling
- **Class 4:** Advanced risk modeling

The appropriate Risk Assessment Class is selected based on the phase of the roadmap to resilience. For example, Class 1 is appropriate for Understanding Risks and to filter properties and hazards that should be studied in more detail. Class 3 and 4 risk models are necessary for quantifying the risks in more detail and for identifying mitigation opportunities. No other platform on the market provides Class 3 or 4 risk assessments across multiple hazards.

Which hazards does Iris assess and how are the risks quantified?

Iris supports delivery of seismic, wind, and flood risk assessments by simulating thousands of virtual hazard scenarios that may impact your properties in the future and quantifying the consequences (see "data and metrics" above). The hazards supported by the Iris risk engines include:

- Riverine flooding
- Stormwater flooding
- Sea level risk
- Earthquakes and liquefaction
- Hurricanes
- Thunderstorms
- Extra-tropical depressions
- Tornadoes

Our engineers and risk and resilience consultants collect exposure and vulnerability data through site visits, building drawing review, and interviews with customer stakeholders and facility managers to develop custom-built models of your individual buildings.

Other natural hazards will be available over time, including wildfire, extreme heat, and smoke.

How are the hazard scenarios developed?

The hazard scenarios are developed off-platform and input into Iris. The hazard data is either curated from high-quality publicly available datasets (typically from government sources like USGS or NOAA), purchased from third parties who specialize in a specific hazard, or developed by Arup hazard modelers. The latter is typically reserved for site-specific detailed risk modeling (Class 3 or Class 4).

Can the impacts of climate change be considered?

Yes. Since the hazards are customizable inputs developed by Arup consultants, Iris can ingest any type of hazard scenario, including those hazards impacted by climate change. Typically, these include multiple Representative Concentration Pathway (RCP) scenarios and specific time horizons in the future.

Why is Iris better than its competitors?

Iris is better than its competitors in two main ways:

1. Iris provides higher resolution assessments founArup's decades of engineering expertise in the built environment that yield specific mitigation actions so you can prioritize investment wisely
2. Iris provides the ability to track your resilience journey over time so you can measure your progress and report ROI.

Competitive products do not provide enough detail to allow you to confidently understand or mitigate your risks. Some competitors provide only risk scores, based largely on hazard data without properly accounting for specific property vulnerabilities (this might be akin to a Risk Assessment Class 1 level of analysis). Others use generic data to quantify risk metrics that do not reflect your individual buildings, drawing upon building archetype information instead. None properly assess the simultaneous impacts to property portfolios from a single hazard event — termed "shared fate" risk. In all cases, the fidelity of the risk assessment is low, making it challenging to develop building-specific mitigations and creating doubt that your decisions will provide a positive ROI.

None of Iris's competitors allow you to dynamically monitor your changing risks as hazards increase and your portfolio grows and none can keep track of mitigation actions, spend, and ROI that provides confidence to leadership stakeholders that the organization is meeting its resilience goals.

In addition, Iris is the only platform that provides risk and mitigation information for climate-related hazards as well as geo-hazards like earthquakes.

How is Iris different than its competitors?

Iris is not a stand-alone platform. It is underpinned by Arup's world class consulting and engineering expertise and combines trusted data sources with Arup's proprietary algorithms to transcend the high-level, cursory risk assessments currently available on other digital platforms. Iris considers how your business functions and Arup engineers develop high-definition building models from scratch, every time. It provides powerful insights to allow Arup consultants to develop a highly customized mitigation plan that will optimize allocated budgets to reduce organizational risks.

How is Iris different than Arup's consulting services?

Iris does not replace Arup's consulting services — it enhances them by providing our engineers and planners a tool to develop greater insights for the benefit of our clients that persist beyond our static consulting deliverables. Access to Iris is provided to you once the initial consulting engagement is completed by Arup, replacing standard deliverables like reports and slides. You will have the option to maintain license access through a software as a service (SaaS) subscription. The insights provided by Iris are refreshed when you make changes to your property portfolio, when hazards change, and as additional data becomes available to augment the level of detail and accuracy in the risk models.

How does Iris provide an enhanced experience relative to Arup's standard risk and resilience deliverables?

Currently, risk and resilience studies and findings are provided through static reporting deliverables. The drawback is that the results and recommendations may become outdated once the portfolio changes due to growth, divestment, and mitigation, when new information about hazards is discovered, when more detailed assessments of buildings are performed, or when improved methods to quantify vulnerability and risk are updated based on new data and research. In the current paradigm, updates to address any of these limitations are manual, increasing latency and costs which slow down resilience progress across an organization. Iris addresses these limitations with an interactive user experience that facilitates quicker updates and preserves historical property data, building upon the foundational risk data provided by Arup from initial consulting engagements.

Iris is designed to be utilized as a repository to consolidate property data and findings from multiple different projects, allowing project managers across an organization a customized view of their projects, and leadership stakeholders a view into all projects across an organization.

If I already have my own engineer, can I still use Iris?

Yes. You may have an engineer who has already performed building evaluations, developed hazard models, or designed retrofits. In that case, Arup consultants would review the existing data for quality assurance and Iris would leverage the re-usable data to quantify risks. If you have a trusted local engineering partner, Arup consultants can collaborate with them to develop data that can be ingested into Iris.

What's so special about the risk modeling approach implemented in Iris?

Iris is powered by a robust risk modelling engine that simulates the impacts of extreme storms, earthquakes, and floods on a virtual model of each of your buildings with a level of detail that is unparalleled in the industry. This allows targeted mitigations to be developed for each building and then re-analyzed to quantify improved performance.

Typically, each component in a building is modeled. The information about the location, quantity, type, and capacity of each component is gathered through site visits, drawing reviews, and normative quantity databases.

Iris has a library of region-specific fragility functions which it assigns to each building component that translates the hazard (e.g., wind speed, flood depth, or earthquake shaking intensity) to the likelihood that the component would be damaged to a certain extent and severity. Fragilities are developed based on physical testing, finite element modeling, empirical observation of damage, and engineering calculations. Leveraging Arup's region-specific consequence function database and proprietary risk modeling approach, the expected damage can be translated into consequences such as repair costs and downtime which is derived based on realistic repair schedules. The consequence databases are developed by Arup's cost estimators and schedulers.

How does this compare with catastrophe models for the insurance industry?

Catastrophe models for the insurance industry are not reliable for risk assessments of individual buildings. They are akin to Risk Assessment Class 2. This may be attributed to the fact that these models are intended to capture the average risks for a large insurance pool of properties (i.e., tens of thousands to hundreds of thousands of buildings), rather than the scale of portfolios that Iris supports (i.e., tens to low thousands). The loss curves employed in the insurance industry are largely derived from actuarial data from claims and other sources, and then assigned to building archetypes that share similar property characteristics (termed primary or secondary modifiers). The amount of data may be sufficient for capturing the risks for a given type of property, on average, but insufficient for individual buildings with unique characteristics. There just isn't enough historical data to fill this gap. Iris sidesteps this limitation by developing models based on principles of engineering, so that any type of building and its unique characteristics can be modeled.

In addition, because the insurance industry is focused on perils in the year ahead, the models have largely ignored climate change. The models are often referred to as backward-looking since the actuarial data that is used to develop the loss curves are based on historical data .

How does Iris quantify uncertainty?

Since Iris runs thousands of scenarios and perturbs the key hazard, exposure, and vulnerability parameters for each realization of the analysis, for each property, the resulting risks describe a range of plausible outcomes. This information can be used to express the levels of confidence in a certain risk metric and can be used to inform decision-making and scenario planning.

The 50th percentile or median results are often used to express the "best estimate" risks while other percentiles can be used to describe upper or lower bounds. There is a 50% confidence that the "best estimate" risk value would not be exceeded, which may not be sufficient confidence to drive certain decisions. Risk averse organizations may instead target a higher confidence level to make important decisions. These organizations may be interested in a 90% confidence level that the loss value would not be exceeded.

Does Iris provide risks associated with utility disruptions?

Yes. Arup consultants can develop risk models for utility disruptions which can be incorporated into the building downtime estimates.

Does Iris work for properties outside of the United States?

Yes, Iris is available internationally. The library of fragility and consequence functions was primarily developed based on standard construction practice in the United States and other countries with modern building codes. For international locations, Arup engineers may need to develop custom fragility and consequence functions based on local practice.

Can Iris support other services beyond risk and resilience?

Additional features that support other property portfolio insights, including building decarbonization strategies, are also planned.

Can I use Iris on my mobile devices?

Not yet. The initial version of Iris will only be available on personal computers.

How can I get started with Iris?

Iris is bundled with Arup's risk and resilience consulting services for organizations with a portfolio of property assets. Arup will work with you to develop a scope of work based on your priority needs and provide a proposal and then deliver results via the Iris platform.

What does it cost?

Each project is supported by an initial consulting engagement. The consulting fees are developed on a project-by-project basis and depend on a number of variables, including the number of buildings and where they are located, the number of hazards considered, and the level of risk assessment.

Iris offers a tiered annual license tied to the customer's portfolio size with average costs ranging from $200 -$500 per building per year for most standard portfolios, with special pricing available for eligible academic institutions and NGOs. For Iris to be most valuable to clients tracking their portfolios, there is a minimum starting portfolio size of about 10 buildings, though buildings can be added individually thereafter. There is no limit to the maximum number of buildings.

How can I get help if I have a problem?

If you require assistance, please email . Iris is supported by a centralized team based in the US and will return your inquiries within 24 hours on business days.

End of Customer FAQ's

Beginning of Internal FAQ's

What clients are you targeting?

We are targeting organizations anywhere in the world that view natural hazards and climate change as an existential threat to the delivery of their core service or mission. Prime candidates include:

- Universities, corporations, and cities that have concentrated assets that can be significantly impacted by a single hazard event
- Data center operators, hospital networks, and other organizations that provide critical services and have very low tolerance thresholds for downtime
- Manufacturing, distribution, and R+D facilities that store, produce, and distribute valuable or mission critical inventory and products

There are several other software solutions in the R&R market that are often cheaper. Why is Iris something Arup's client would even consider?

In the past two years, Arup's Risk & Resilience (R&R) practice has seen many emerging clients reach out after testing out-of-the-box software solutions providing generic recommendations. They were consistently disappointed with the shallow level of insights and lack of actionable recommendations and were looking for more detailed assessments that could be presented to leadership to demonstrate a business case and to take action.

Emerging refers to organizations that recently identified R&R as a priority, where R&R is often part of a larger function within an organization (e.g., operations, ESG, or finance). Leaders have identified R&R as a strategic priority and have R&R teams dedicated to delivering continuous monitoring and improvements.

Who at Arup is going to use Iris?

In addition to risk and resilience analysts using the platform, Iris will be used by Arup PMs and PDs to interact with and Q/A results and by skills leaders to develop improvements to risk and resilience assessments (e.g., making use of the data lake, AI/ML).

The creation of a digital version of a client's portfolio also offers the benefit of accelerating the cross-selling of related offerings such as decarbonizations, facades, or security. Iris can therefore be used by customer relationship managers and business leaders at Arup as a lead generation tool.

How are you on-boarding early adopters?

Clients best positioned to be onboarded to Iris are being presented with a consulting scope along with Iris as a digital deliverable, accessed via a licensing model. In the early stages, access to Iris may be absorbed into consulting fees for a trial period if the MVP (Minimum Viable Product) is considered too speculative. Iris is not presented as a standalone option at this time. Ideally, early adopters will be providing Arup with feedback to inform additional features and adjustments.

What functionalities will the MVP offer?

Iris MVP will provide four modules to clients to view, sort, and filter: my assets, my current risks, my resilience journey, my mitigation backlog.

The focus is on digital delivery of class I and III or IV assessments and visualization of risks at the portfolio level for seismic, wind, and flood hazards.

Clients will have the ability to:

- Create new assets and projects
- View their risk over time, in individual or aggregate views (e.g., campus, project, or portfolio level)
- Export data formatted for internal stakeholders
- Collaborate online with Arup's consultants to inquire about existing assessments/mitigations
- Acknowledge reception of an assessment and mitigation strategies
- Request new assessments for existing or new assets
- Manage users in their organization
- Manage their notifications, subscribe to notifications for a project (e.g., new assessment, new comment)

To deliver the client experience, Iris also offers an Arup's facing experience where consultants can:

- Create and manage organizations

- Create and manage assets for each organization (e.g., region, campus)
- Create and contribute to a project (projects are a custom subset of assets)
- Create, edit, review, and publish class I assessments (e.g., qualitative desk-study with high/medium/low risk grading for individual buildings)
- Create, edit, review, and publish class III assessments for an individual asset or shared-fate assessments (e.g., quantitative study based on asset's specifications, in-the-field studies, and risk engine calculations)
    - create, edit, and QA individual building models, hazard models (e.g., import model for shared-fate assessments), building components
    - set-up, run, and QA risk engines (e.g., wind, flood, seismic) aggregate and raw outputs for individual and shared-fate assessments
    - edit, review, and publish class I and III assessment (e.g., risk engine output, narrative, graphs, recommended mitigations)
- Versioning for all models used in assessment creation (e.g., building, hazard, components, risk engine) to provide traceability

Class III and IV assessments provide in-depth risk analysis, shared-fate scenarios when appropriate, and specific mitigations strategies, both operational and asset retrofit/upgrade

How will Iris help scale our risk and resilience consulting globally?

Iris will enable multi-hazard risk and resilience consulting services to be delivered locally in all regions, supported by a centralized Iris team who can skill up teams across Arup to onboard clients to the platform.

Iris will help to standardize the portfolio risk and resilience offering, currently centralized in San Francisco, and expand the capability across Arup globally. We intend to achieve this through a standardized workflow, shared and versioned component libraries, cloud-based risk engines, and a common assessment publication tool.

In some cases, Arup's experts will need to develop region-specific fragility and consequence functions for some building components. The platform will allow this process to be done without any intervention required from the software product development teams. Over time, as global users are on-boarded, the libraries of components, fragility functions, and consequence functions will expand to cover all regions of the world.

How do I access Iris?

To get started with a new client on Iris, reach out to gettingstarted.iris@arup.com. A team member will reach out to set-up the client's organization and start creating the portfolio.

The service will then be accessible at (need to figure out URL scheme between: iris.arup.com/clientname and clientname.iris.arup.com)

Clients and Arup's collaborators will be required to use 2FA to access any account or data.

How can I get help if I have a problem?

For assistance with an issue or to learn more about how to use Iris, please reach out to support.iris@arup.com.

Arup's historical model has been to deliver bespoke consulting services. Iris is a standardized platform with subscription fees and digital deliverables. What are the benefits for Arup?

Currently, Arup's risk and resilience services to portfolio clients share a common workflow that is generally manual, uses local machines, and generates one-off project-based deliverables that are static. As a cloud-based portfolio risk platform that digitizes workflows and deliverables, Iris provides consistency and scalability that supports rising customer demand while accelerating client acquisition and cross-selling across Arup.

While Arup's traditional engineering services are often set up to deliver a single project for a single client, the resilience advisory service responds to a different need. Iris takes advantage of the fact that resilience is a multi-year journey for our clients and within a dynamically changing environment insights must constantly be refreshed over time. This enables us to transform how we monetize our advisory as we guide our clients on their resilience journey.

This model allows the further development and expansion of a consistent and recurring high-value consultancy offer to large portfolio owners, as well as a revenue-earning subscription model to support further development and maintenance of the platform.

How big is the business now and who are our clients?

The current consulting revenues from the property portfolio risk and resilience service totals roughly $4–5m per year, in the Americas alone. This is primarily delivered from our risk and resilience teams in San Francisco and New York. Multiple industry sectors are represented and clients include Amazon, Amazon Web Services (AWS), Facebook, Nike, Levi-Strauss, University of British Columbia, and Stanford University.

How big could the climate resiliency business be for Arup?

The threat of natural hazards and climate change has increased the risks to organizations, including the physical and business impacts of hurricanes, flooding, earthquakes, wildfire, and sea level rise. A recent analysis of corporate disclosures from the world's largest companies reported a potential $1tr in losses due to environmental impacts — especially flood, seismic activity, and rising temperatures.

In addition, the global climate change consulting market was estimated to be valued at $5.5bn in 2018, up from $5.3bn in 2017. By 2026, the market is projected to reach $8bn, exhibiting a CAGR of 4.8% over the forecast period (2018–2026). Furthermore, investment into climate tech increased from $418m in 2013 to $16.3bn in 2019, over three times the growth rate of investment into artificial intelligence.

Iris provides insights beyond climate change impact, but the metric is instructive. We have projected TAM from both a top-down and bottom-up approach to reach an estimate of $1.6bn. This is based on a $250,000 average fee for 6,000 companies on the NYSE, 300 national universities, 100 general governments, and 133 special districts. We have projected SOM of approximately $30m within three to five years in the Americas.

What revenues do you expect from Iris and related consulting over the next five years?

In this early stage, multiple scenarios for future growth and impact on Arup's consulting practice have been modeled. Assumptions for a medium-growth scenario may be found below. Consultancy fees have been estimated based on fees for over 20 previous single or multi-hazard risk assessment projects for large portfolio clients. The services provided included site selection, risk quantification, and resilience strategy. On this basis, the average consulting fee estimate we have used for the Iris financial model is $4000 per building, with an average portfolio size of 50 buildings.

We also believe there will be additional consulting revenue we can generate due to more client touch points as a result of Iris (e.g., Iris will alert customers that they need to do a more detailed assessment for some buildings that are initially flagged as high risk through screening). There will also be efficiency and

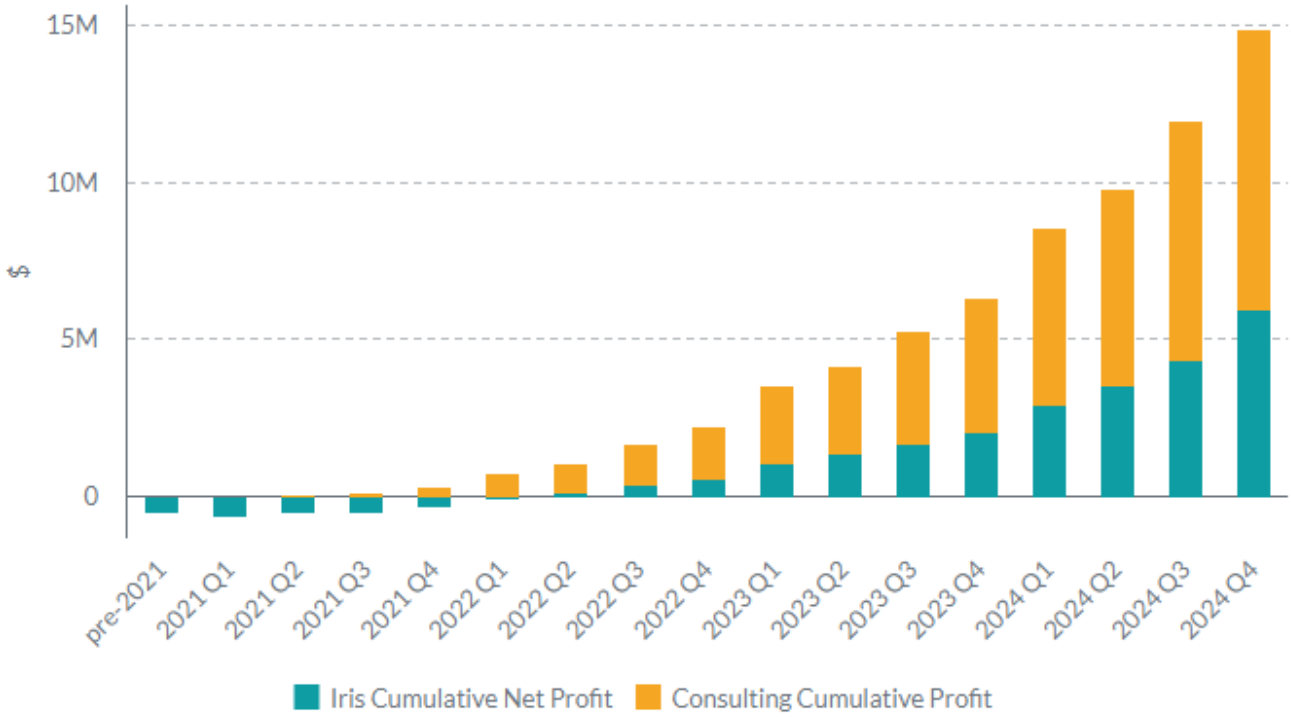
profitability gains for project teams from use of the Iris platform, attributable to risk engine and post-processing automation, as well as a decrease in duplicative, low-value work for repeat clients.

Based on historical data, we have maintained a profit margin on consulting of 10–15%. Adoption rate is set at 175% per annum, with an assumption that existing clients add an average of 10 buildings per year to the Iris platform.

Pricing data was collected from early adopter interviews via an online form that allowed them to express desired cost in whatever metrics they chose. These results centered on a per-building annual license fee of $250–1000, to be further refined as the Iris platform is deployed.

The proposal to early adopters is for an upfront license fee payment to invest in development of the Iris platform. The first of these accepted proposals has been at a $650 per building per year pricing scheme.

The pricing model and reinvestment structure will evolve over time as we gain feedback from early adopters and gain a deeper understanding of client needs. Projections below reflect efficiency gains.



How did we prioritize seismic, flood, and wind? Were any other hazards or features considered for the platform?

We identified seismic, flood, and wind as priority hazards through client interviews and market research. The risk engines for these hazards have already been developed. We have plans to develop and implement probabilistic risk models for wildfire and extreme heat in the near future.

End of Internal FAQ's
