

## Manitoba Climate Resilience Training: Climate Change Survey

Engineers Geoscientists Manitoba  
January 2023



**PROBE**  
RESEARCH INC.

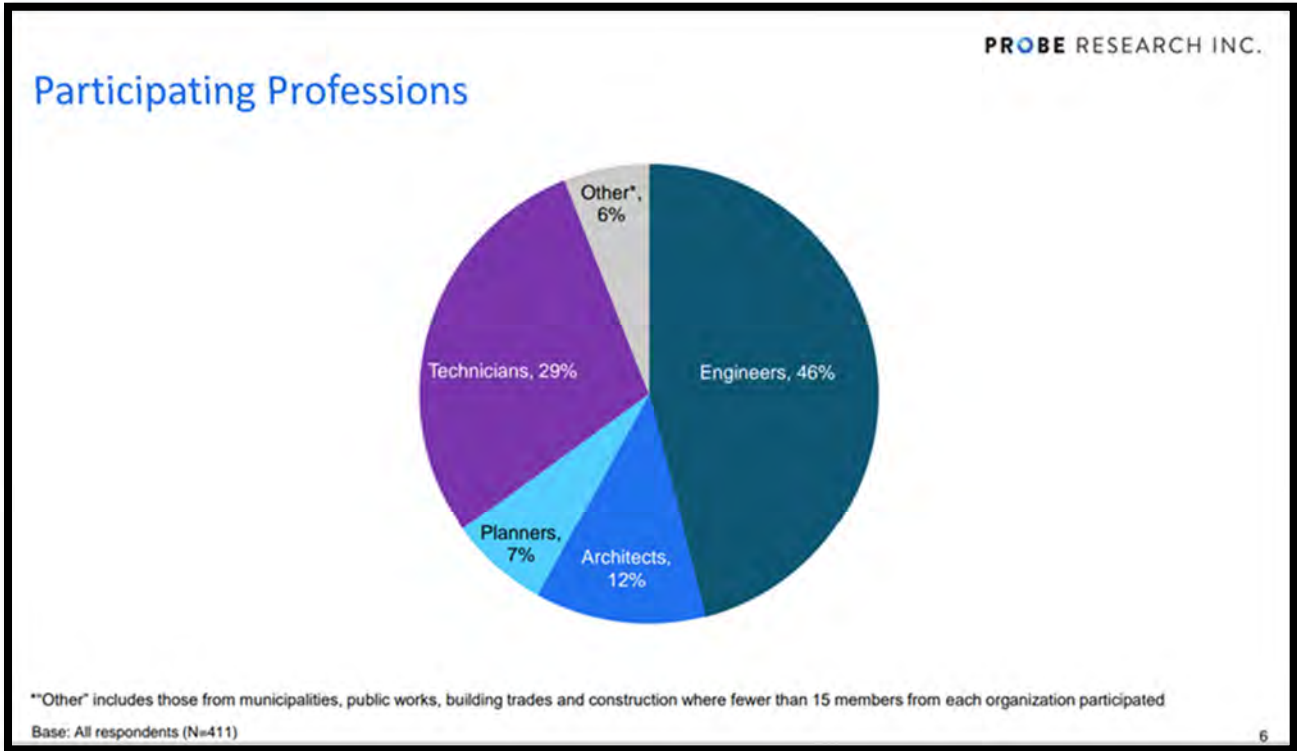
As part of its research and planning work on the Manitoba Climate Resilience Training (MCRT) Infrastructure project, Engineers Geoscientists Manitoba contracted Probe Research Inc. to conduct an online survey of practitioners and other allied infrastructure professionals and decision-makers. The survey was conducted between December 6, 2022 and January 6, 2023.

### Who responded to the survey

The objective of the survey was to gauge the level of interest in key training topics and methods. It also sought to understand the degree to which infrastructure professionals already design with climate change adaptation and mitigation in mind. The survey was sent out to over 9,000 practitioners of Engineers Geoscientists Manitoba as well as to practitioners from allied professional organizations. A total of 411 completed responses were received.

The allied professionals who completed the survey, and their partner organizations that distributed the survey to their practitioners, were:

- Architects, via the Manitoba Association of Architects
- Urban planners, via the Manitoba Professional Planners Institute
- Engineering and applied science technicians and technologists, via the Certified Technicians & Technologists Association of Manitoba
- Municipal leaders, via the Association of Manitoba Municipalities
- Construction industry leaders, via the Manitoba Construction Sector Council
- Building trades, via the Manitoba Building Trades Institute
- Senior municipal administrators, via the Manitoba Municipal Administrators' Association
- Public works professionals, via the Canadian Public Works Association



### Relationship building with Allied Professional Organizations

The reason for broadening the survey input beyond the Association’s engineer and geoscientist practitioners was the recognition that our professions benefit from a common understanding of climate change. The MCRT Core Team met with each organization initially to explain the objective of the survey and to invite their organization’s participation. This provided an opportunity to build awareness of the Association and its past and present plans for Climate Change training. We were also interested to learn about other organizations and their respective Climate Change training plans.

The organizations and Engineers Geoscientists Manitoba expressed their willingness to cross-promote Climate Change training opportunities with each other’s practitioners to avoid duplication, thus making efficient use of limited training development dollars. A possible future development under consideration is the establishment of a community of practice of allied professional organizations providing Climate Change training in Manitoba and the western provinces.

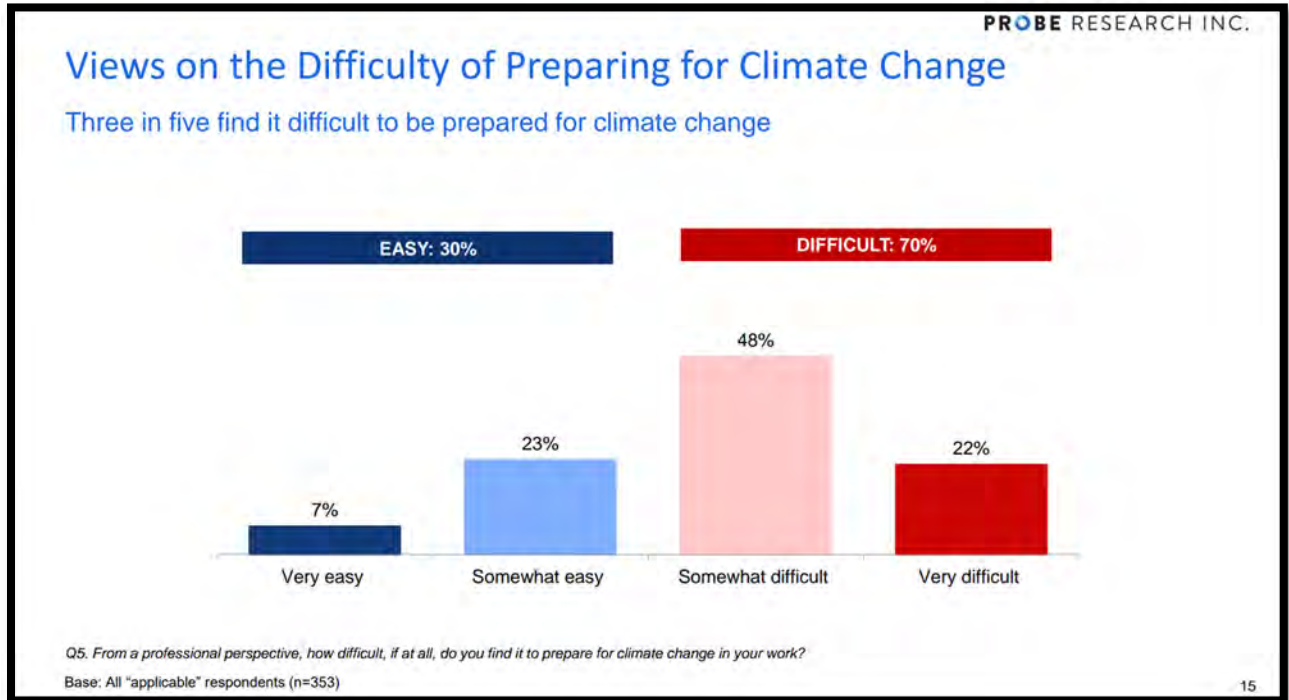
### Key Survey Findings <sup>1</sup>

85% of respondents indicated that it was somewhat urgent or very urgent to take action on climate change.

<sup>1</sup> Because a non-random, non-representative open online survey is a sample of convenience, no margin of error can be ascribed. Caution should be taken when interpreting data from populations with bases fewer than 100.

## Difficulty of Preparing for Climate Change

Professionals working in the infrastructure sector generally find it difficult to prepare for climate change in their work.



## Reasons for Finding it Difficult to Prepare for Climate Change

For more than one-half, particularly for architects, budgets and costs are the top barriers to preparing for climate change in their work. Since engineers work closely with architects, it is important to take note of the challenges faced by our allied professionals and endeavour to resolve them.

However, respondents identified a significant list of additional barriers they commonly face, including the fact that climate-related best practices are not mandatory or regulated and that clients are unwilling to incorporate climate considerations into projects. As well, respondents noted they simply lack the tools and training.

## Reasons for Finding it Difficult to Prepare for Climate Change

Budget and a lack of tools and compulsory codes are barriers to preparing for climate change



Q6. Why do you find it difficult to incorporate climate change considerations into your work? Please read the following list and rank your top three responses.

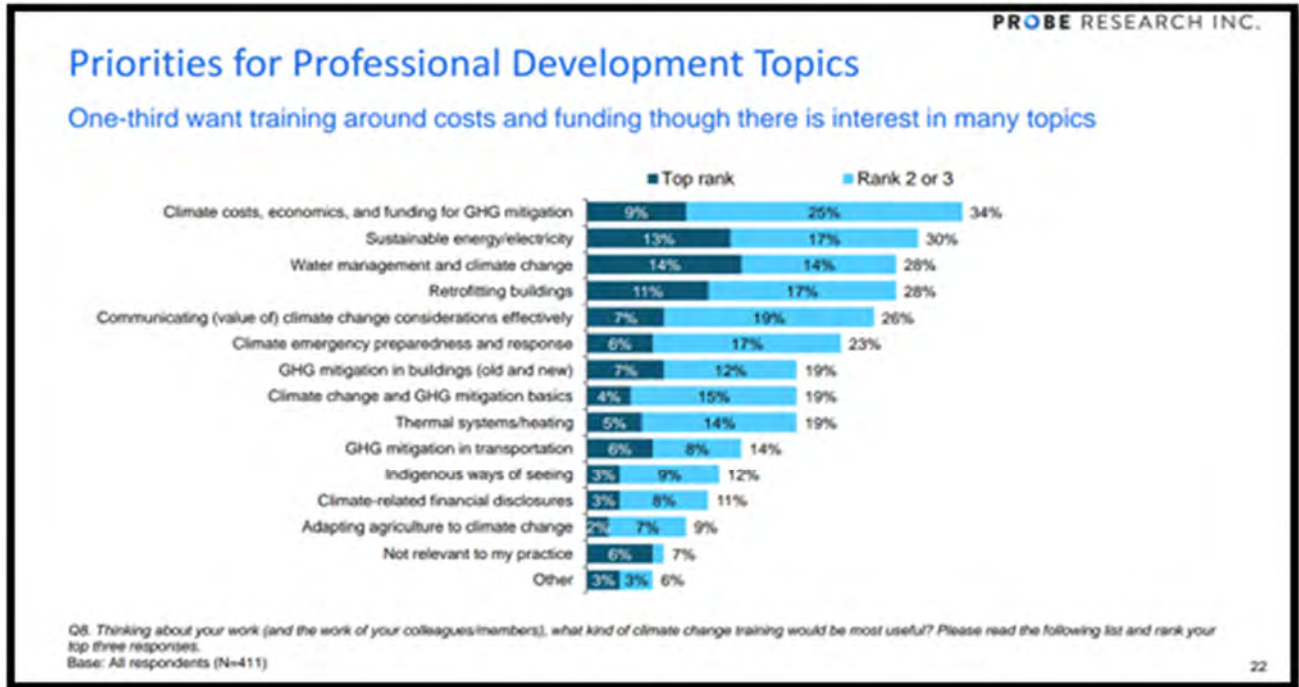
Base: Those who say it is very or somewhat difficult to be prepared for climate change (n=247)

### What we heard

These are a few comments we received from the survey:

- *How an action or design or even a design decision might affect Climate Change is not obvious and not easily calculated or portrayed. Is it the construction cost, the operating cost or a combination of the two with an additional "social" benefit? Clarity for practicing Engineering would be a good thing!*
- *We [are] all responsible for this but we don't want [to] spend money for this because it is not shown visually when we do the projects.*

## Priorities for Professional Development Topics



Respondents had a wide variety of climate change topics they wish to learn more about. For about one-third, particularly Planners, training around the costs and funding opportunities for climate mitigation is a top need. This correlates with budgets being the top barrier to incorporating climate change considerations in practice.

About one-third of respondents were interested in learning more about green energy and water management. Building retrofits also topped the list, especially for architects. Since a lack of tools, resources and information were the second and sixth highest barriers to climate change consideration incorporation, providing training, tools, and resources in the priority areas should positively impact professional practice.

Because survey respondents indicated that getting clients and management on board is a barrier to preparing for climate change, it is not surprising that many indicated that learning to effectively communicate the value of climate change considerations is one of their higher priorities. This training priority was also identified in the April 2021 Probe Research Climate Change Survey of Engineers Geoscientists Manitoba practitioners.

The fourth highest reason for not incorporating climate change was that the building codes do not currently require it. However, the 2020 building codes are being adopted in Canada and do include climate change mitigation measures. Therefore, training in greenhouse gas (GHG) mitigation in buildings has been taken to be topics of interest from this survey. Climate change codes and standards was also the topic of highest demand in the April 2021 Probe Research Climate Change Survey.

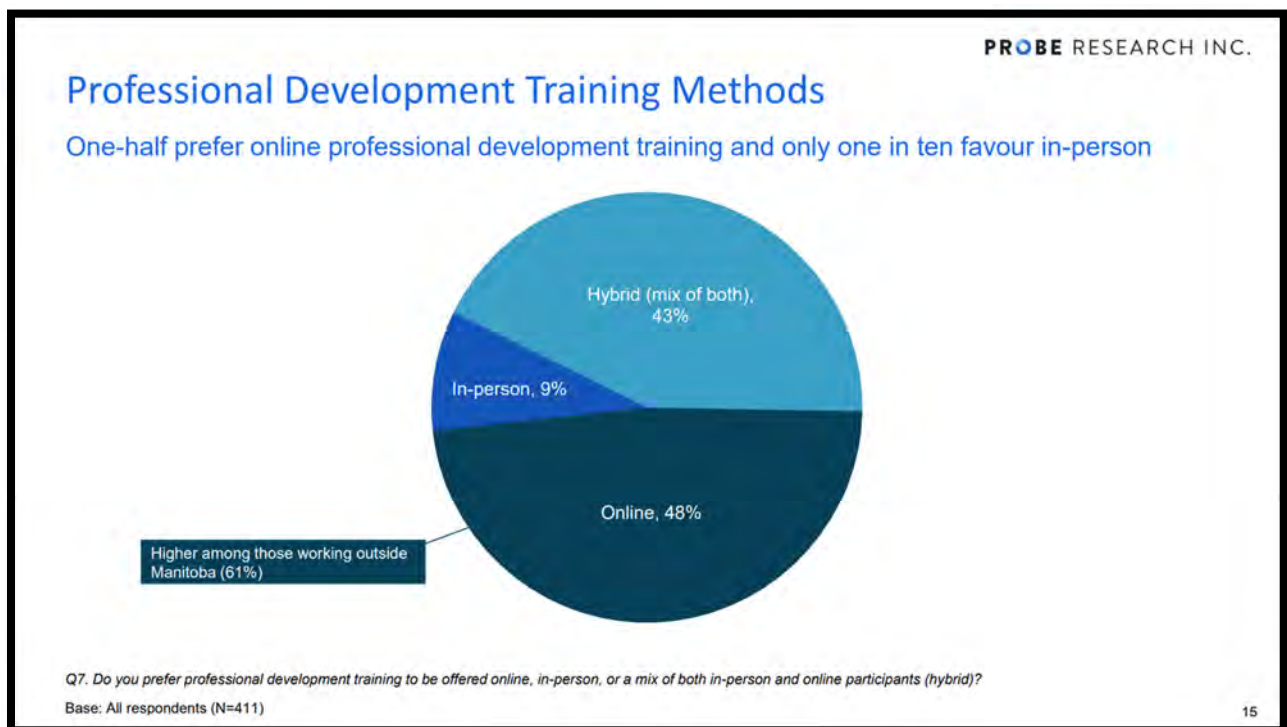
Only seven per cent felt the training topics listed were not relevant to their practice.

What we heard - Additional training topics of interest:

- Existing and future infrastructure design considerations, especially flooding
- Planning and design for climate change adaptation and resilience: land use; infrastructure; urban forests; urban heat islands; water
- Climate change and transportation infrastructure
- Embodied carbon
- Case studies from areas ahead of us
- Advisement of programs other countries have launched regarding green manufacturing - say for aerospace related chemicals/plating coatings

### Training Delivery Preferences

There was a strong demand for online training, or at least a hybrid option, with only 9% preferring in-person training delivery.



What we heard:

- I think a mix of online and in-person would be beneficial. The online sessions are nice when they are 1–2-hour weekday sessions that can be joined remotely. I think an in-person conference or day of training would also be very helpful.