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Communicating Complexity: Innovative Public Outreach During a Major Hot Water Downtime in Iceland

*Ingólfsdóttir, Silja[1] and Ingvarsdóttir, Rún[2]
Veitur Utilities, Reykjavík, Iceland
silja.ingolfs@veitur.is

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INTRODUCTION

In 2024, Veitur Utilities in Iceland executed the largest and longest planned hot water distribution downtime in its 100-year history. The operation affected four municipalities, numerous public institutions, and over one-third of Iceland's population. The downtime was necessary to connect a new large main pipeline serving a large part of the capital area—an engineering challenge requiring a complete system shutdown.

This paper examines how proactive, clear, and non-technical communication was central to the project's success. Technical excellence alone cannot ensure success in public infrastructure projects; communication must be accessible, transparent, and empathetic. Building upon best practices and studies in risk and crisis communication, Veitur communicated early, clearly, open and honestly to build public understanding and trust. Veitur's approach transformed a potentially disruptive event into an example of collaboration and shared purpose.

1. CULTURAL SHIFT AND HOT WATER DISTRIBUTION

1.1 A Cultural shift

Veitur Utilities provide hot and cold water, wastewater services and electric distribution to about 70% of the population in Iceland. Due to its concession-based status as an operation, customers have no choice but to use its services.

Veitur have been strategically changing the company's culture. Instead of users of our services, we now speak of customers and stakeholders. Customers and the eyes of society have for the last few years been at the center of our strategy, emphasizing our core as a service provider.

Before the cultural shift, the communication from Veitur was largely one-directional—informing residents of outages without much consideration of their impact. Planning was internally focused, and public sentiment often negative.

This changed when Veitur adopted a customer-centric philosophy and strategy. Planned outages

have minimum of 3-5 days' notice for the customers, depending on the medium and businesses in the affected area. A new project now includes communication personnel in planning and asks the question: "How will this affect residents and businesses in the area? What must they know, and how do we explain it clearly?" This shift reflects our strategy as a service provider that has the customer at its core.

1.2. Hot water distribution

In Iceland, hot water is used for house heating and outside swimming pools are an important part of the social culture. They are warm and cozy due to the hot water distributed by utility companies. Shutting down the hot water distribution for 36 hours therefore means that the houses get colder than the population is used to, swimming pools are closed for at least two days, small businesses such as hairdressers must close for the time being, hotel guests and residents must shower elsewhere. Furthermore, the electrical grid is not designed for general use of electrical heaters.

In Iceland the window for utility work, such as laying pipes in the ground, is mostly limited to the months from March to October. The risk of snow or storm disrupting the work at both ends of the window is constantly looming. Furthermore, since the hot water heats the houses the possibility for hot water shutdown is even shorter and never done when temperature is below 0°c. Hence, shutdowns are planned as late in the groundwork season as possible without much risk of minus degrees. This generally means late August before colder weather sneaks upon us.

2. METHODS AND APPROACH

Due to the complexity of the shutdown and the various projects using the shutdown to complete their connections, detailed planning was necessary. The first technical meeting was in May 2024 and communication personnel were included. This was part of the cultural change, not merely informing communications, but including them from the beginning. At this initial meeting the shutdown date was decided: Non-negotiable and side projects had to be ready or miss the window of opportunity.

The methods used were built upon risk and crisis communication frameworks, alongside useful guidelines for science communication as laid out by Borowiec (2023). Although a planned outage is neither a risk nor a crisis, the communication principles are quite useful tools. The six principles of Crisis and Emergency Risk Communications (CERC) as published by the Centers for Disease Control and Prevention (2018) can easily be adopted in outages, both planned and sudden.

Moving beyond the limited time of the outage itself, Veitur Utilities continued monitoring multiple communication channels and responding to misinformation and confusion before, during and after the planned outage. This approach aligns with more recent publication on crisis communications (Jong, 2025).

In a planned outage involving communications early, there is the "luxury of time to fully develop and test messages in an effort to maximize their effectiveness" (Veil et al., 2008) and this was used to the benefit in this case.

2.1. What matters, when it matters

The communication strategy was detailed with timed and clear responsibility for each part.
The message headline was clear: Veitur are connecting an important pipeline to ensure all residents have necessary infrastructure and quality of life for the future. Veitur are doing it for us all in society.

Coordination with the four municipalities was initiated early on, since they are an important partner in informing institutions and vulnerable people within their vicinity. Detailed Questions and Answers for their service centers, mirroring the one for Veitur services, posters and an announcement from Veitur was provided to them. This both prepared the municipalities for inevitable questions from the public and assisted Veitur in delivering the message.

Vulnerable businesses were called on the phone, focusing on small businesses that are unable to operate without hot water. Hotels, restaurants and shops received an email. The early proactive communication eased concerns and increased understanding.

2.2. Plain Language and Non-Technical Speak

A key factor in the project's success was the deliberate use of plain language. Technical terms such as "depressurization" or "thermal stress" were replaced with relatable descriptions. For instance, instead of "pressure stabilization," Veitur explained: "We must turn the water on slowly, so the system adjusts safely."

The public received emails in general simple language, sparking widespread news coverage. Up until the week before non-specialists did the interviews, making sure the message was understood by the media and the public. More detailed information came strategically in the media the week leading to the shutdown, keeping in mind the simple message whilst also providing more in-depth information in plain language.

Research supports that plain language improves comprehension and fosters trust (Borowiec, 2023). By avoiding jargon, Veitur turned complex geothermal engineering into an understandable story of community progress.

2.3. Multi-Channel Communication Strategy

Veitur employed a diverse communication strategy to reach all audiences, the audiences being diverse within the area:
- Early outreach to municipalities and vulnerable institutions and businesses.
- Media interviews and online news coverage highlighting collective benefits.
- Continuous updates on Veitur Website, SMS, and social media with photos.
- Community-level engagement through local Facebook groups and forums.

Multiple channels ensured message consistency and accessibility across demographics. Adjusting the headline accordingly was necessary, without losing the main message of the collective benefits.

2.4. Communicating Uncertainty and Aftermath

Acknowledging uncertainty was vital. Veitur openly stated that leaks might occur and that water heating would take time. Updates emphasized realism: “Some areas will get hot water earlier than others—this is normal.”

By communicating uncertainty clearly, Veitur reinforced credibility and managed expectations. Detailed follow-up information—such as how to report leaks or file insurance claims—sustained trust after the event.

3. RESULTS AND PUBLIC RESPONSE

The 36-hour shutdown concluded successfully and on schedule. Veitur delivered what they previously advertised, confirmed to the schedule without compromising safety of pipes and personnel.

Veitur’s customer service team received around 2,000 inquiries from customers, less than 5% of the affected people, with most being questions, not complaints. Public and media sentiment was notably positive, with coverage praising Veitur’s transparency and preparedness.

Social media interactions showed that posts emphasizing empathy and simplicity achieved the highest engagement. This confirms that the choice of clear, non-technical language resonates with the public and builds long-term confidence in essential infrastructure.

4. DISCUSSION AND LESSONS LEARNED

This project offers key lessons for utilities and infrastructure operators:

1. Start early: Communication should begin alongside technical planning.
2. Speak simply: Replace jargon with familiar plain language.
3. Develop a simple, positive and consistent message for communications.
3. Acknowledge uncertainty: Be transparent about risks and unknowns.
4. Use multiple channels: Adapt messages to different audiences.
5. Maintain empathy, optimism and respect: Recognize inconvenience but highlight shared benefits.
6. Coordinate externally: Ensure consistent messaging with various stakeholders and partners.

These principles reflect best practices in risk and crisis communication and are applicable to both large and small projects affecting the public, even if the projects are not a crisis involving danger to people.

5. CONCLUSION

Veitur's 2024 large shutdown operation demonstrated that effective communication is as critical as engineering precision. Through transparent updates, accessible language, and diverse communication methods, Veitur strengthened public trust and turned an unavoidable service disruption into a story of shared achievement.

In modern geothermal utilities, communication is not supplementary—it is a core infrastructure supporting both technical excellence and public confidence.

6. REFERENCES

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