**Direktoratet for mineralforvaltning**
med Bergmesteren for Svalbard

# Limiting Pollution from Former Mining Area, Folldal Center

## Presentation at Market Dialogue, September 23, 2025

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# Project Team – DMF Integrated Action Plan Folldal

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# Why an innovative procurement?

- Goal to comply with the mandate – but can we achieve more?
  - Meet the Water Framework Directive
  - More sustainable – e.g., extract metals, reduce landfill volume
- BUT not at the expense of fulfilling the mandate
  - Treatment efficiency
  - Robustness
- DFØ and LUP will present the way forward at the end of the conference

# About DMF

- Expert body and sector authority for mineral resources and activities
- Mission:
  - Facilitate **long-term and sustainable extraction and processing of minerals**
  - Contribute to **increased value creation** through responsible resource management
  - Ensure **Svalbard's geological resources** are used for the benefit of society

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- Subordinate to the Ministry of Trade, Industry and Fisheries (NFD)
- On behalf of NFD, DMF implements measures to reduce environmental impacts from former mining activities in areas where NFD has ownership or management responsibility.

# Pollution Situation in the Folla River

Annually, Folla receives:

- ~9 tons of copper
- ~6 tons of zinc
- ~130 tons of iron
- ~580 tons of sulfate

Due to acid mine drainage and inflow from the mine via Stoll 2

Poor ecological and chemical status in the river

Utslippspunktet til Folla (Asplan Viak, 2020)

# Mandate of February 16, 2024

To meet the Water Framework Directive, the Ministry of Trade, Industry and Fisheries (NFD) is required to implement measures to reduce pollution from the mining areas in Folldal so that environmental goals can be achieved in Folla.

Target water quality levels:

Copper: 7.8 µg/L

Zinc: 11 µg/L

Deadline for implementation: June 1, 2028

Helhetlig tiltaksplan for Folldal gruver

Folldal gruver. Foto: Stiftelsen Folldal gruver, https://folldalgruver.no

# Integrated Action Plan, 2022

**Step 1**: Improve drainage and acid water systems

**Step 2**: Secure mine waste from runoff – capping (not implemented yet)

**Step 3**: Water treatment solution (treatment plant)

Steps 1 and 2 aim to control sources and minimize water flow to the treatment plant (step 3)

# Area for Treatment Solution

*Elveslette mellom F1 og Folla. Kilde DMF*


*Figur 1 Oversikt over område nedenfor FV29 der surt og metallholdig vann samles opp og renner ut i elva Folla (foto: finn.no/kart)*

# Landfill

- Ordinary waste landfill – local in Folldal
- Hazardous, stable, non-reactive waste can also be placed there
- If hazardous waste is generated, it must be handled differently
- Work is ongoing to identify and regulate suitable landfill areas and secure land access

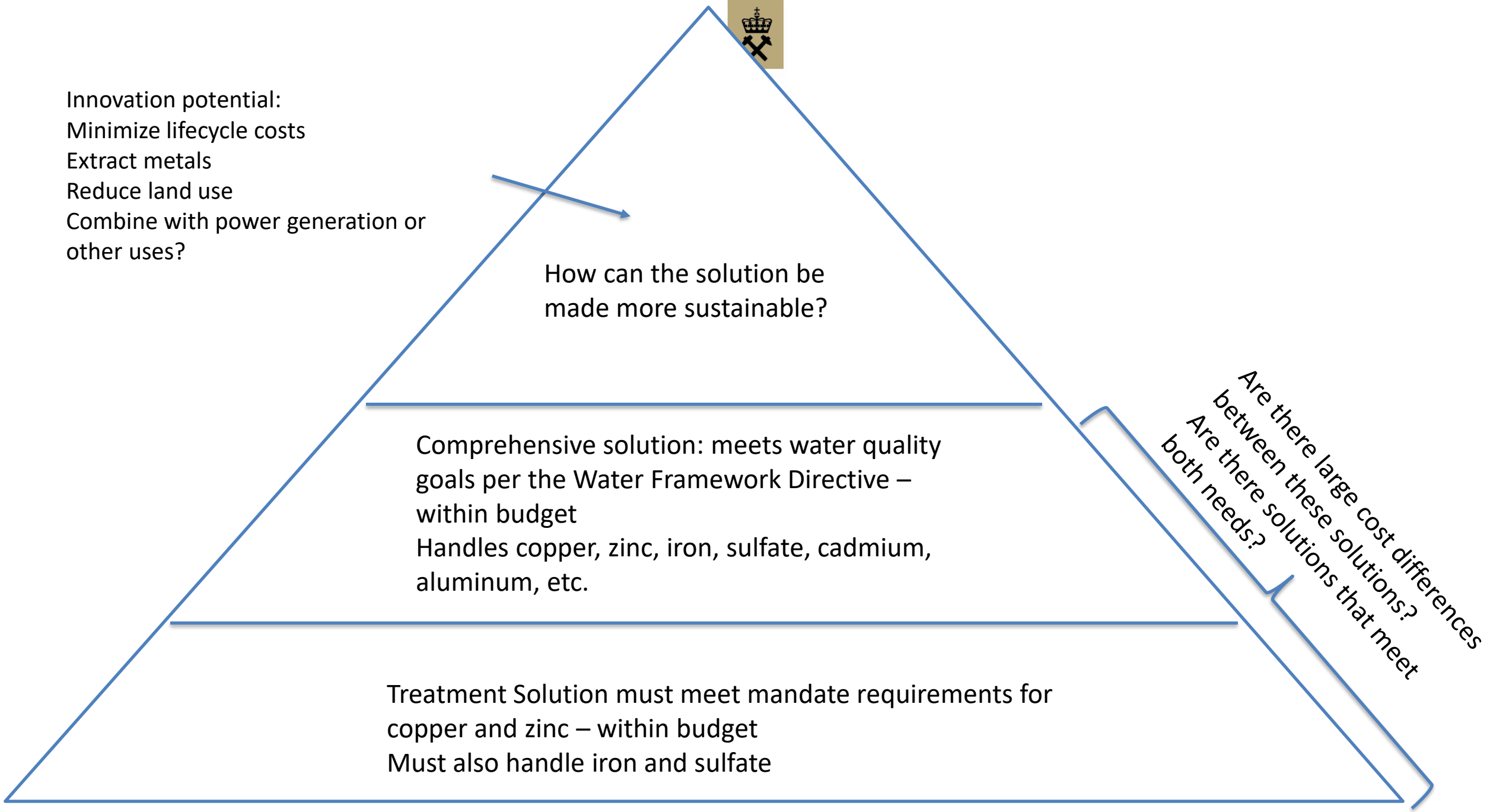
Eksempel på et arrondert deponi. Foto: Lindum AS

# Water Data

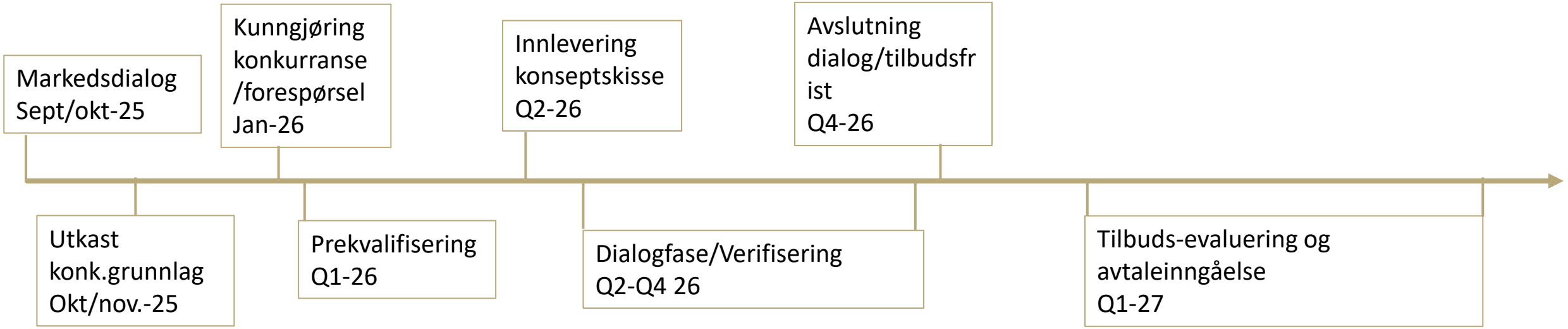
*Tabell 1 Vanndata (vannføring, konsentrasjon og mengde) for stasjon F1 (oppstrøms FV29) i perioden 2023-2024*

| Periode | Vannføring (l/s) | Cu (mg/l) | Zn (mg/l) | Cd (mg/l) | kg Cu/døgn | kg Zn/døgn | kg Cd/døgn |
|---|---|---|---|---|---|---|---|
| Vinter (snitt) | 3,25 | 54,6 | 36 | 0,129 | 15,3 | 10,1 | 0 |
| Normal (snitt) | 8,8 | 53,5 | 33 | 0,139 | 40,7 | 25,1 | 0,1 |
| Snøsmelting snitt (vannføring snitt 23/24) | 38,6 | 40,4 | 27 | 0,092 | 127 | | |
| Ekstrem hendelse. Maks | 140 | | | | ca. 600 | | |

- In addition, there is sulfate concentration ~4000 mg/L and iron ~850 mg/L
- Large seasonal variations in water flow
- Snowmelt varies year to year
- Heavy rainfall events – likely to increase in the future

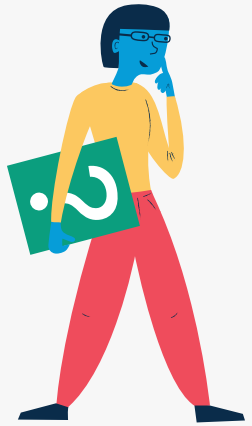

Innovation potential:
Minimize lifecycle costs
Extract metals
Reduce land use
Combine with power generation or other uses?
How can the solution be made more sustainable?
Comprehensive solution: meets water quality goals per the Water Framework Directive – within budget
Handles copper, zinc, iron, sulfate, cadmium, aluminum, etc.
Treatment Solution must meet mandate requirements for copper and zinc – within budget
Must also handle iron and sulfate
Are there large cost differences between these solutions?
Are there solutions that meet both needs?

# Tidslinje


Markedsdialog
Sept/okt-25
Kunngjøring konkurranse /forespørsel
Jan-26
Innlevering konseptskisse
Q2-26
Avslutning dialog/tilbudsfrist
Q4-26
Utkast konk.grunnlag
Okt/nov.-25
Prekvalifisering
Q1-26
Dialogfase/Verifisering
Q2-Q4 26
Tilbuds-evaluering og avtaleinngåelse
Q1-27

# Possible paths to innovation through procurement

What solutions are available on the market and do they solve my needs?



Nei → Procurement of innovation/ development services - R&D

Delvis →
- Purchase of innovative solutions
- Purchase of a new or untested solution
- Demand innovation beyond the minimum requirements of the procurement (innovation-friendly procurements)

Ja → Traditional Off-the-shelf procurement



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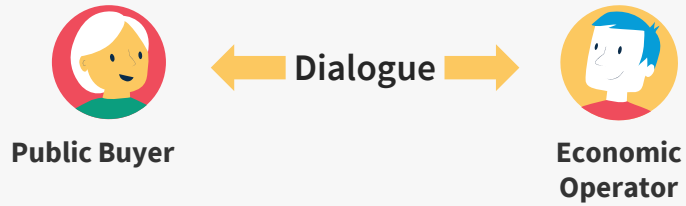
# Choice of procedure

Relevant ways to conduct the competition

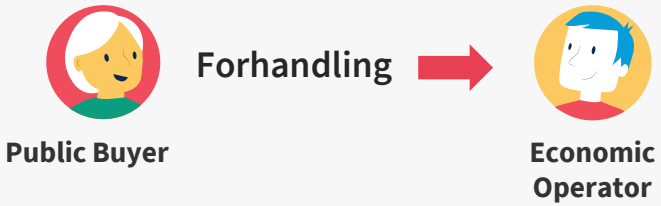
## Competitive dialogue

Procurement of an innovative or complicated solution, where you need a dialogue with the providers to get clarification about both how to best request a solution, and how the solution can be delivered in the best possible way.




## Negotiated procedure

Procurement of an innovative or complicated solution where you need to negotiate with the providers to optimize the terms and form of the delivery in order to get good offers that meet your needs.

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# Procedural steps

The process

**Competitive dialogue**

| Request to participate deadline | Qualification | Submission of initial bids | Dialogue/concept development | Submission of final bids/ evaluation | Standstill period |
|---|---|---|---|---|---|
| 30 days | 5–10 days | 25 days | 30–180 days | 25–45 days | 10 days |

Min. 125 days from announcement to signed contract.

**Competitive procedure with negotiation**

| Request to participate deadline | Qualification | Submission of bids | Negotiations/evaluation | Standstill period |
|---|---|---|---|---|
| 30 days | 5–10 days | 25 days | 20–120 days | 10 days |

Min. 90 days from announcement to signed contract.

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