

# David Doms

Designer and cold climate lover that  
wants to bridge cryosphere science  
into society

# An Interreg Aurora Project

Multidisciplinary approach for creating public spaces on and adjacent to frozen waterways under varying [climatic] conditions

# Team

Municipal coordination: Oulu & Luleå

Cryosphere research teams: LTU & U-Oulu

Design- and innovation lead: Studio Doms

Landscape architecture: Outer Space Architects

Urban cultural programming: Local collaborators

# Winter City Opportunities

The invaluable resource of frozen waterways as underutilized urban areas expanding cities during winter

Snow & ice as circular building materials

Establish winter as planning priority and the primary season for togetherness, urban culture and recreational play

Learnings from other successful winter interventions

Embrace the unprogrammed power of snow and ice





# Winter Urbanism

Practice-based innovation for vibrant urban life in a changing climate.

# Winter City Challenge 01

Citizens as individuals: Loneliness and exclusiveness. How do we get people outside to improve quality of life and public health?

# Prototyping Opportunity 01

Citizens as individuals: Design public spaces for inclusiveness! Places for togetherness.  
Facilitate Urban Cultural Programming for engagement on off-peak hours!

# Winter City Challenge 02

Citizens as individuals: Loneliness and exclusiveness. How do we get people outside to improve quality of life and public health?

Citizens as a collective: Loss of local identity - Who we were? Who we are?

# Prototyping Opportunity 02

Citizens as individuals: Design public spaces for inclusiveness! Places for togetherness.  
Facilitate Urban Cultural Programming for engagement on off-peak hours!

Citizens as a collective: **Decide and act as the city we want to be!**

# Winter City Challenge 03

Citizens as individuals: Loneliness and exclusiveness. How do we get people outside to improve quality of life and public health?

Citizens as a collective: Loss of local identity - Who we were? Who we are?

City: Lack of public spaces in winter - Is city planning for summer only!?



# Prototyping Opportunity 03

Citizens as individuals: Design public spaces for inclusiveness! Places for togetherness.

Facilitate Urban Cultural Programming for engagement on off-peak hours!

Citizens as a collective: Decide and act as the city we want to be!

City: Use the power of snow and ice to design irresistible human-centred public spaces.

# Winter City Challenge 04

Citizens as individuals: Loneliness and exclusiveness. How do we get people outside to improve quality of life and public health?

Citizens as a collective: Loss of local identity - Who we were? Who we are?

City: Lack of public spaces in winter - Is city planning for summer only!?

Climate change: How to tackle varying conditions, shorter winter seasons, late ice coverage, varying amounts of snow?

# Prototyping Opportunity 04

Citizens as individuals: Design public spaces for inclusiveness! Places for togetherness.

Facilitate Urban Cultural Programming for engagement on off-peak hours!

Citizens as a collective: Decide and act as the city we want to be!

City: Use the power of snow and ice to design irresistible human-centred public spaces

**Climate change**: Scientific monitoring and testing to implement science into societal planning for future scenarios! Poor/late ice coverage? Establish on land!

# Winter City Challenge 05

Citizens as individuals: Loneliness and exclusiveness. How do we get people outside to improve quality of life and public health?

Citizens as a collective: Loss of local identity - Who we were? Who we are?

City: Lack of public spaces in winter - Is city planning for summer only!?

Climate change: How to tackle varying conditions, shorter winter seasons, late ice coverage, varying amounts of snow?

**Municipal facilitation**: How to ensure annually recurring public winter spaces?

# Prototyping Opportunity 05

Citizens as individuals: Design public spaces for inclusiveness! Places for togetherness. Facilitate Urban Cultural Programming for engagement on off-peak hours!

Citizens as a collective: Decide and act as the city we want to be!

City: Use the power of snow and ice to design irresistible human-centred public spaces

Climate change: Implement science into societal planning for future scenarios! Poor/late ice coverage? Establish on land!

**Municipal facilitation**: Break silos, allocate resources and responsibility, collaborate with local organisations and businesses and plan for varying conditions in collab with science!

# Winter City Challenge 06

Citizens as individuals: Loneliness and exclusiveness. How do we get people outside to improve quality of life and public health?

Citizens as a collective: Loss of local identity - Who we were? Who we are?

City: Lack of public spaces in winter - Is city planning for summer only!?

Climate change: How to tackle varying conditions, shorter winter seasons, late ice coverage, varying amounts of snow?

Municipal facilitation: How to ensure annually recurring public winter spaces?

Safety and construction: How do build and maintain public spaces on frozen waterways in a safe way?

# Prototyping Opportunity 06

Citizens as individuals: Design public spaces for inclusiveness! Places for togetherness.

Facilitate Urban Cultural Programming for engagement on off-peak hours!

Citizens as a collective: Decide and act as the city we want to be!

City: Use the power of snow and ice to design irresistible human-centred public spaces

Climate change: Implement science into societal planning for future scenarios! Poor/late ice coverage? Establish on land!

Municipal facilitation: Break silos, allocate resources and responsibility, collaborate with local organisations and businesses and plan for varying conditions!

Safety and construction: Decisions based on scientific tests, monitoring and scenarios.

# Winter City Challenge 07

Citizens as individuals: Loneliness and exclusiveness. How do we get people outside to improve quality of life and public health?

Citizens as a collective: Loss of local identity - Who we were? Who we are?

City: Lack of public spaces in winter - Is city planning for summer only!?

Climate change: How to tackle varying conditions, shorter winter seasons, late ice coverage, varying amounts of snow?

Municipal facilitation: How to ensure annually recurring public winter spaces?

Safety and construction: How do build and maintain public spaces on frozen waterways in a safe way?

Design and landscape: Where to establish? How, what and for whom do we design and how to use snow and ice as building materials?

# Prototyping Opportunity 07

Citizens as individuals: Design public spaces for inclusiveness! Places for togetherness. Facilitate Urban Cultural Programming for engagement on off-peak hours!

Citizens as a collective: Decide and act as the city we want to be!

City: Use the power of snow and ice to design irresistible human-centred public spaces

Climate change: Implement science into societal planning for future scenarios! Poor/late ice coverage? Establish on land!

Municipal facilitation: Break silos, allocate resources and responsibility, collaborate with local organisations and businesses and plan for varying conditions!

Safety and construction: Decisions based on scientific tests, monitoring and scenarios.

**Design & Landscape**: Varying scales, from small nooks to squares. Form snow and ice with wind, precipitation and temperature as forming elements. Protect from weather and wind. Embrace line of sight! Places for conversation, sharing food, play and experiences!

# Where Research Comes into Play

Citizens as individuals: Design public spaces for inclusiveness! Places for togetherness. Facilitate Urban Cultural Programming for engagement on off-peak hours!

Citizens as a collective: Decide and act as the city we want to be!

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# A Shallow Deep Dive into our Cryosphere Research Topics

Field Monitoring and Data Acquisition  
Numerical and Theoretical Modelling  
Safety Thresholds and Climate Scenarios  
Integration and Knowledge Transfer

# Winter Urbanism

Practice-based innovation for vibrant urban life in a changing climate.

# Practice-based Innovation = Real World Iterative Prototyping

Build & maintain 10 prototypes/winter

Public spaces and scientific sites

Engaging with society through inclusive design,  
collaboration and urban cultural programming

We plan and test to learn and refine over and over

# Outcome

A municipal toolbox for establishing annually recurring public winter spaces improving quality of life for citizens and visitors in arctic cities.

Thank you!

Questions?