CO_2 SMART DISTRICT ENERGY NETWORK

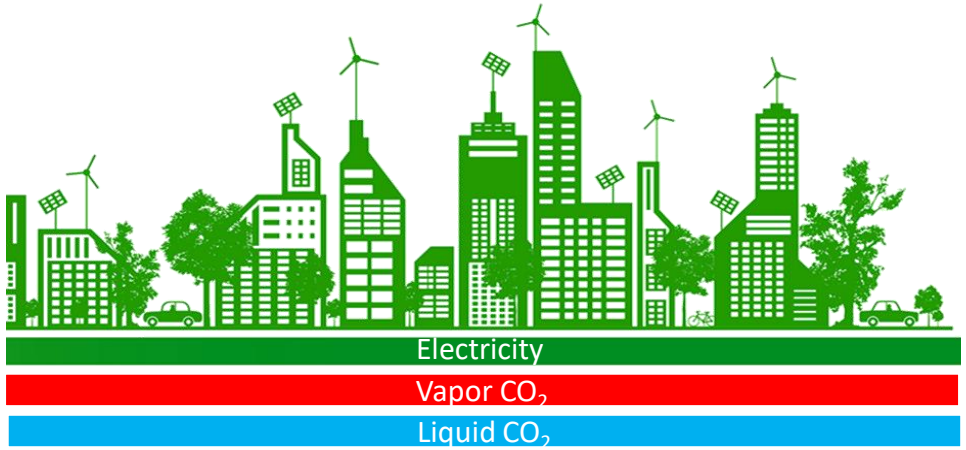
AN OPPORTUNITY FOR UTILTIES AND DISTRICT OWNERS

TRIGENERATION SMART DISTRICT ENERGY NETWORK WITH CO2

ExerGo revolutions the way energy (trigeneration: heating/cooling and electricity) is supplied by utility companies worldwide by offering a patented CO2 horizontal thermal network allowing them to boost energy efficiency.

A compact and low footprint solution for utilities to meet their emissions targets in a profitable way (increased ARPU).

Circuits sharing energy among buildings in the city



- more than 75% energy savings
- 50% smaller footprint
- 50% costs and time reduction
- up to 80% of global GHG emissions

CO_2 EMISSIONS = GLOBAL WARMING = EXISTENTIAL THREAT

ExerGo

Global Warming

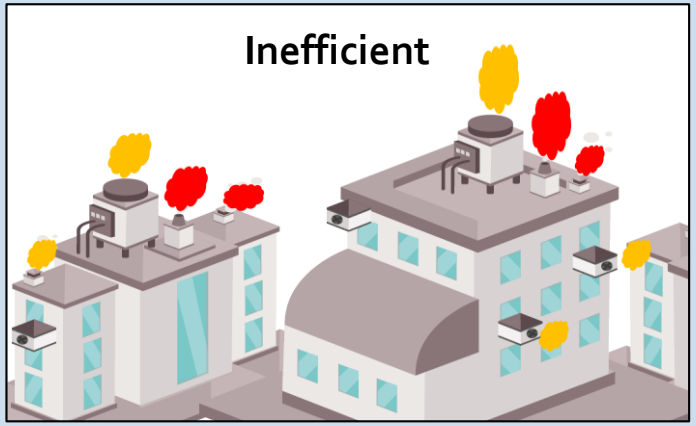
Increasing social pressure

Dramatic Climate Events

Political pressure

Today's urban energy systems

Inefficient



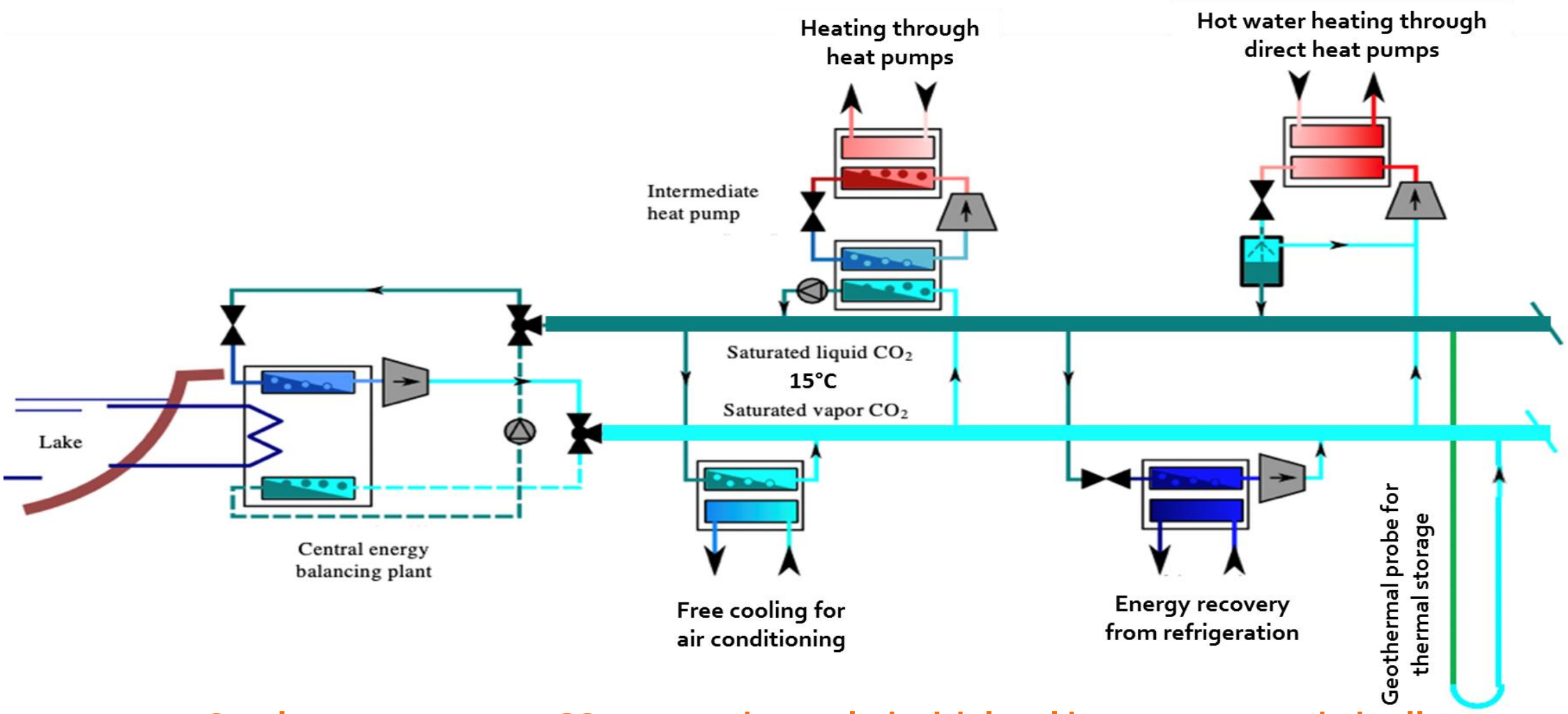
Bulky

27,2 % of the greenhouse gas emissions globally comes from cities

65 % inhabitants living in cities in 2050 (EU projections)

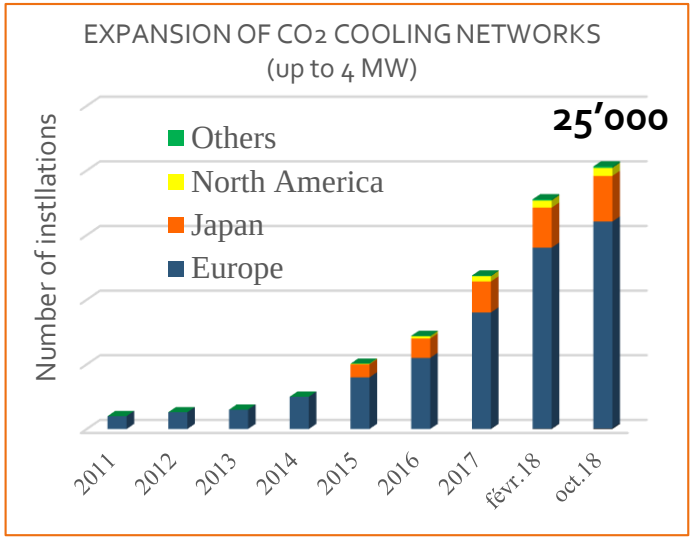
OUR SOLUTION

DISTRICT HEATING, AIR CONDITIONING AND REFRIGERATION WITH TWO PIPES USING CO_2 PHASE CHANGE



One low temperature CO_2 network coupled with local heat pumps to do it all, allowing synergies between users

WHY NOW ?
THE PERFECT TIMING



Growing competition among utilities to broaden their energy services and to show their involvement against climate change

Heat pumps and fuel cells are recognized environment friendly technologies

Growing need for:
- Air conditioning
- Substitution of synthetic polluting refrigerants

Growing availability of:
- CO_2 refrigeration/air conditioning units
- Equipment for CO_2 networks applications

High thermal energy density allows:
- Smaller and flexible pipes
- Smaller footprint
- Faster installation

Our new technology is well aligned with the paradigm shift towards an energy efficient, decarbonized and electrified society

R&D AND TECHNOLOGY READINESS

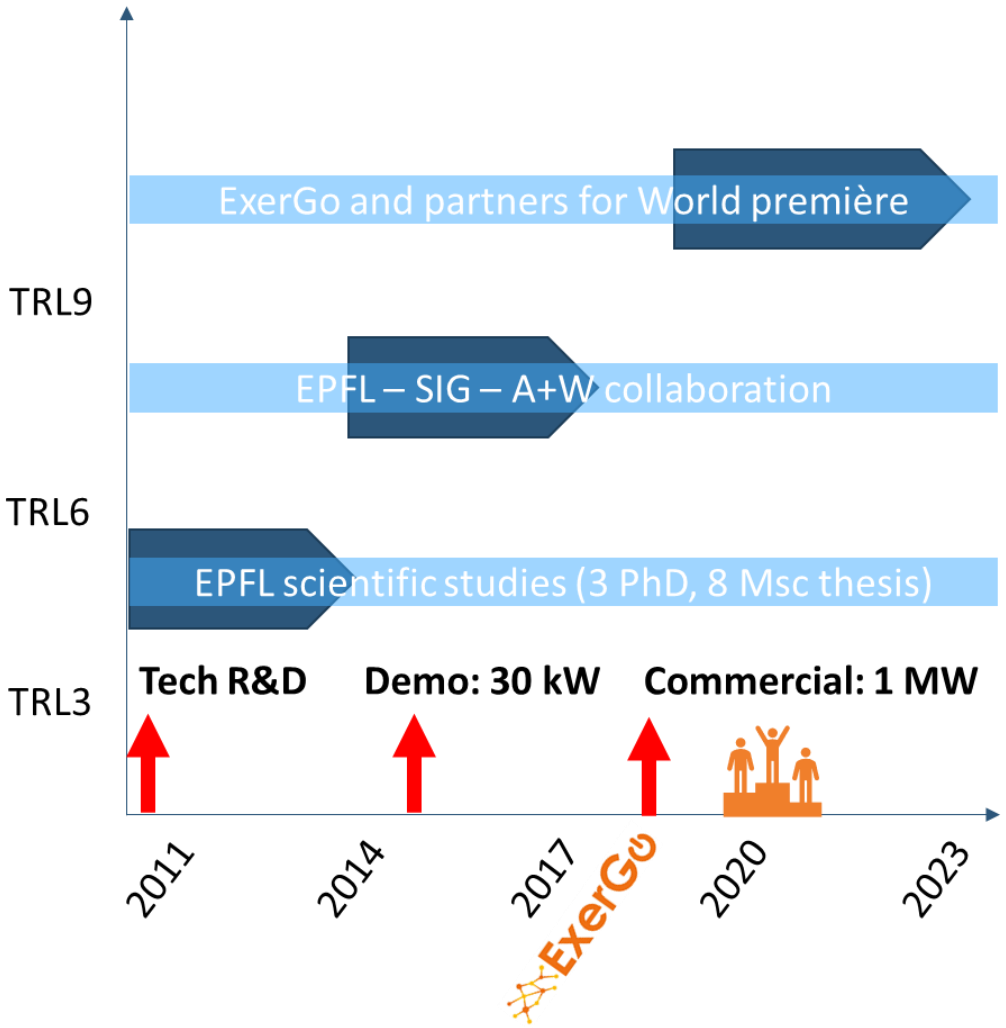
3 PhD Thesis (Weber 2008, Henchoz 2016, Suciu 2019) + 10 master thesis + 1 demonstration setup

Successful scaled down facility tests

Simulation of a well-documented city quarter

Reduction of 84.4% of final energy consumption.

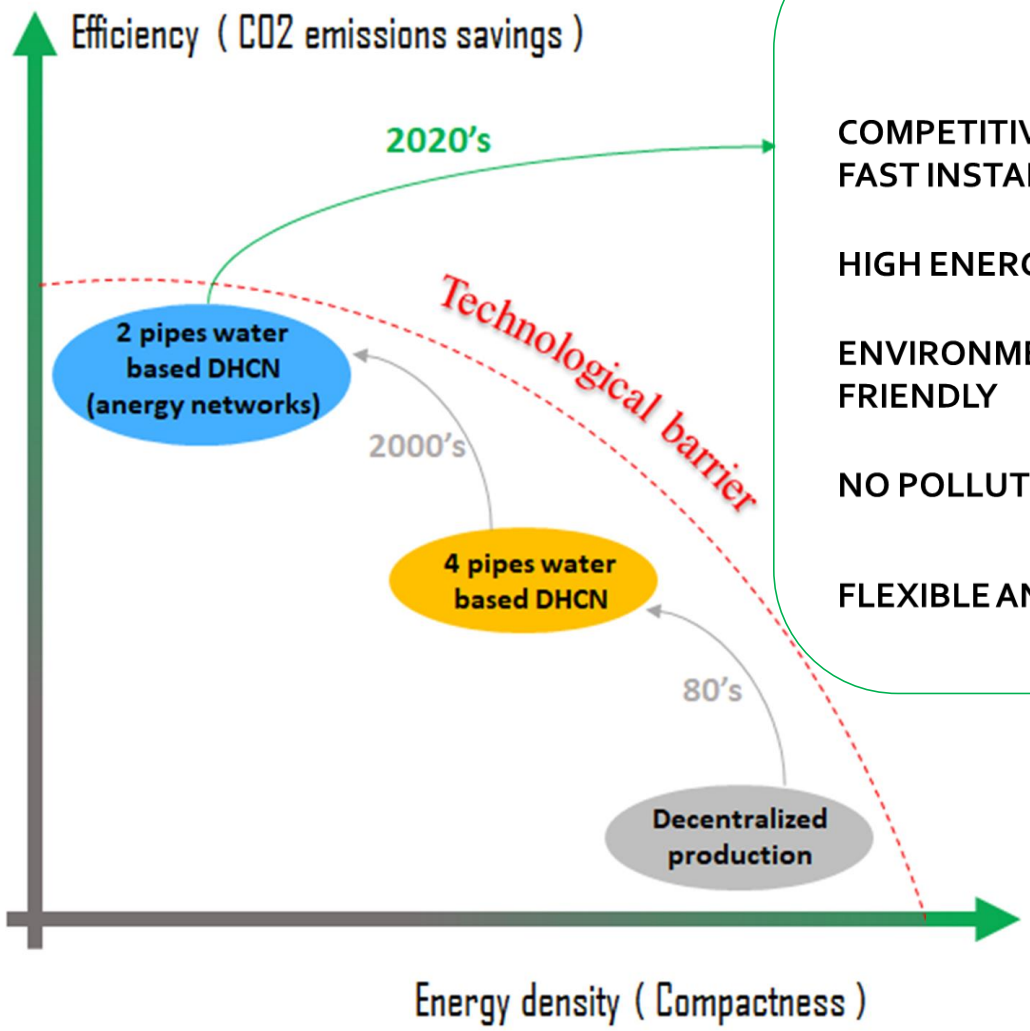
Reduction of greenhouse gas emissions up to 99.9%, depending on the electricity generation



COMPETITIVE LANDSCAPE

STICKING TO EXISTING TECHNOLOGY IS LIMITING

CO2: when your enemy becomes your best friend



	ExerGo	2 PIPES H_2O NETWORKS	4 PIPES H_2O NETWORKS	GAS AND OIL BURNING
COMPETITIVE COST & FAST INSTALLATION	✓	✗	✗	✓
HIGH ENERGY DENSITY	✓	✗	✗	✓
ENVIRONMENTAL FRIENDLY	✓	✓	✓	✗
NO POLLUTION IF LEAKING	✓	✓	✓	✗
FLEXIBLE AND EXTENSIBLE	✓	✗	✗	✗

The most efficient and compact patented system on the market!

UNIQUE SELLING POINTS & KPI

DISTRICT HEATING, AIR CONDITIONING AND REFRIGERATION

PATENTED TECHNOLOGY EXCLUSIVE LICENCE (CH – FR – DE – UK)

CERTIFIED SOLUTION FOLLOWING CH – EU – US STANDARDS

COMPONENTS ALREADY AVAILABLE IN THE MARKET

OPTIMIZATION FOR TAILORED SOLUTIONS

100% RENEWABLE THERMAL ENERGY

FIRST CO_2 DHCN WORLD PREMIERE

80 %

UP TO 80% GLOBAL GHG EMISSIONS

75 %

OVER 75% OF ENERGY SAVINGS

50 %

50% SMALLER FOOTPRINT

50 %

OVER 50% COST AND TIME SAVINGS

ExerGo drives Exergy as the future efficiency standard

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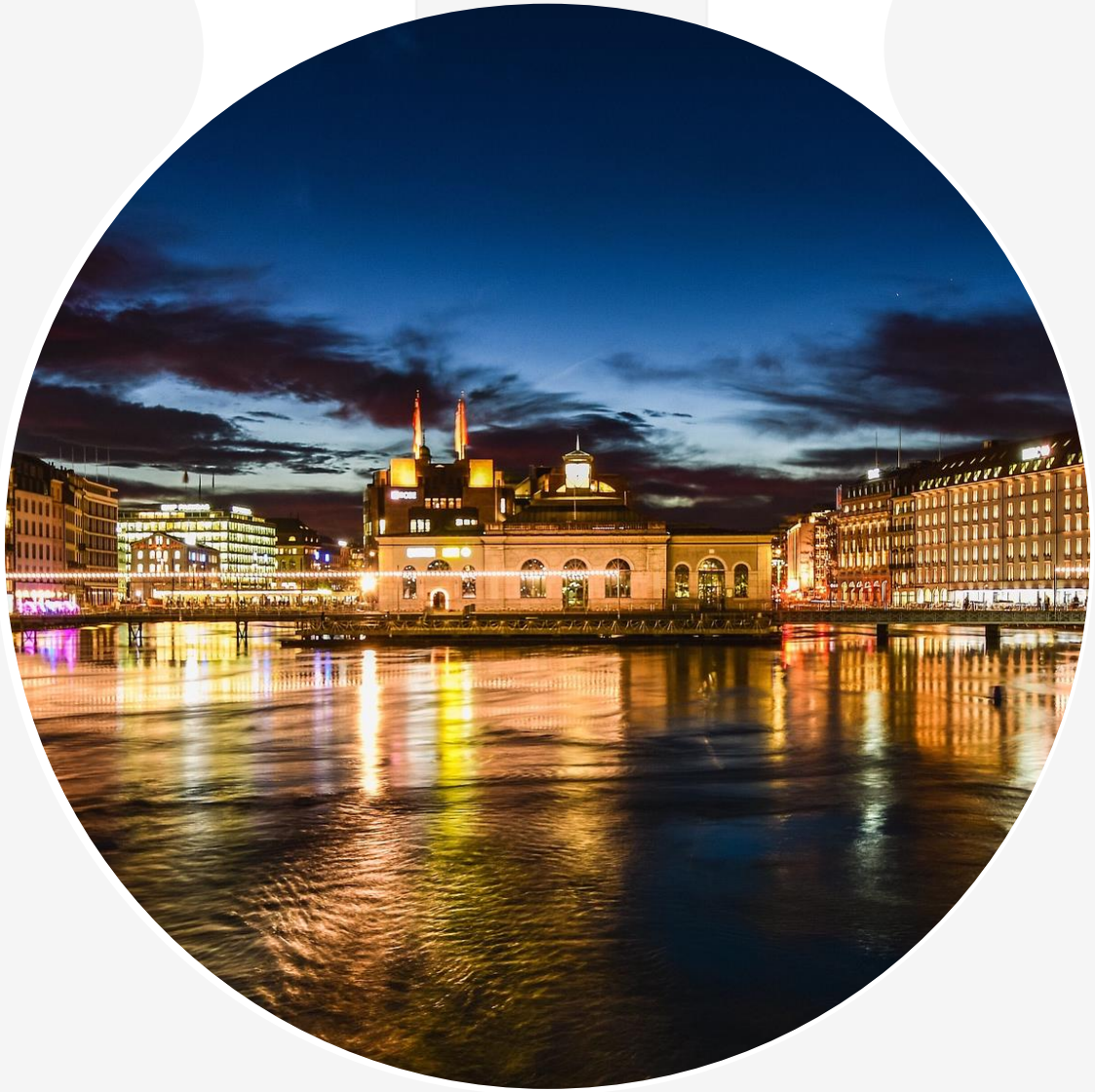
Hes·so VALAIS WALLIS

GEM



THANK YOU!

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