

A large, semi-transparent globe made of interlocking puzzle pieces, set against a light blue background. The globe is the central visual element of the slide.

**Supporting Renewable Technology
Inclusive Heat Supply Legislation for**

**Developing the Law "On Heating"
for the Republic of Kazakhstan**

Ronald Rost, Dornier Power and Heat GmbH, Germany

14 June 2023, Manila, Asian Clean Energy Forum

Dornier Group introduction

Project summary

The way forward for Kazakhstan heating sector

Company and Knowledge united in Five Business Units

MOBILITY



The designers
of mobility

Railroad Systems &
Logistics

Mobility Strategies &
Transport Systems

Green Transport
incl. E-Mobility

Aviation & Airports

Real Estate Management

WATER



The specialists
for water resources

Water Supply &
Wastewater Management

Strategic Reservoirs

Monitoring

Groundwater
Management

NUCLEAR SERVICES



The professionals
for nuclear technology

Deconstruction Planning

Disposal Planning

Nuclear Waste Management

Repository Documentation

Radiation Protection

POWER AND HEAT



The experts
for energy

Engineering

O&M Germany

O&M International

RENEWABLES



The companions
the energy turnaround

Solar

Wind

Grids & Storage

The Dornier Group stands for



60 years of market experience

EUR 80 million sales

1,100 projects per year

2,000 employees worldwide

21 subsidiaries distributed over

9 countries In Europe, Asia and Africa



Dornier Group introduction

Project summary

The way forward for Kazakhstan heating sector

ADB TA 6564 KAZ Supporting Renewable Technology inclusive Heat Supply Legislation (2020 – 2023)

- Assess the existing situation,
- Develop a suitable heat supply sector model,
- Draft the new legislative package on heat supply based on international practice replicable in Kazakhstan, with focus on renewable energy integration and participation of the private sector (PPP),
- Support the consultation process, undertake capacity building.

The Draft Law «On Heating» is currently being debated in the Parliament. It is expected to pass soon. 7 main documents of secondary legislation are developed and „ready to go“.



Due diligence found substantial weaknesses



Reliability



Efficiency

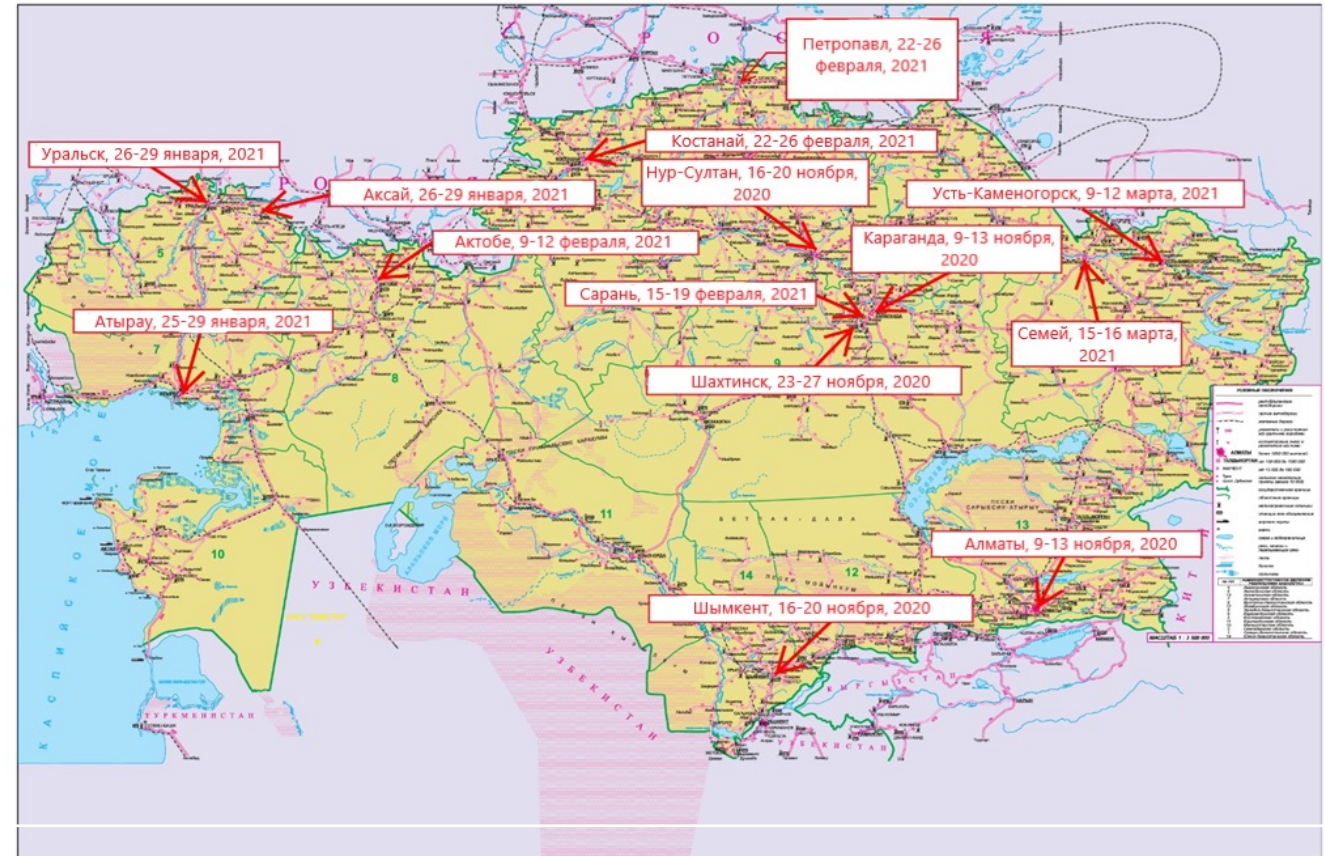


Sustainability

Detailed comparison with suitable comparator jurisdictions



- Legislative, institutional, regulatory structure
- Efficient and effective technologies
- Use of renewable energy sources
- Approaches to planning
- Tariff regulation and tariff structure
- Support of vulnerable consumers
- Professional capacity and gender equality
- Involvement of private sector



Technical Due Diligence in 14 cities

Identifying problems

01 

Lack of Strategic goals and Plans

02 

Investment Deficit

03 

Lack of Responsibility and lack of Information

04 

Loss-Making and Inefficiency of Heat supply Entities

05 

Inefficiency in Budget Spending

06 

Lack of Instruments for resolving Local Economic and Technical problems

07 

Problems in the System of Technical Commitments and Standards

08 

Failure to Regulate the relationship between Actors

09 

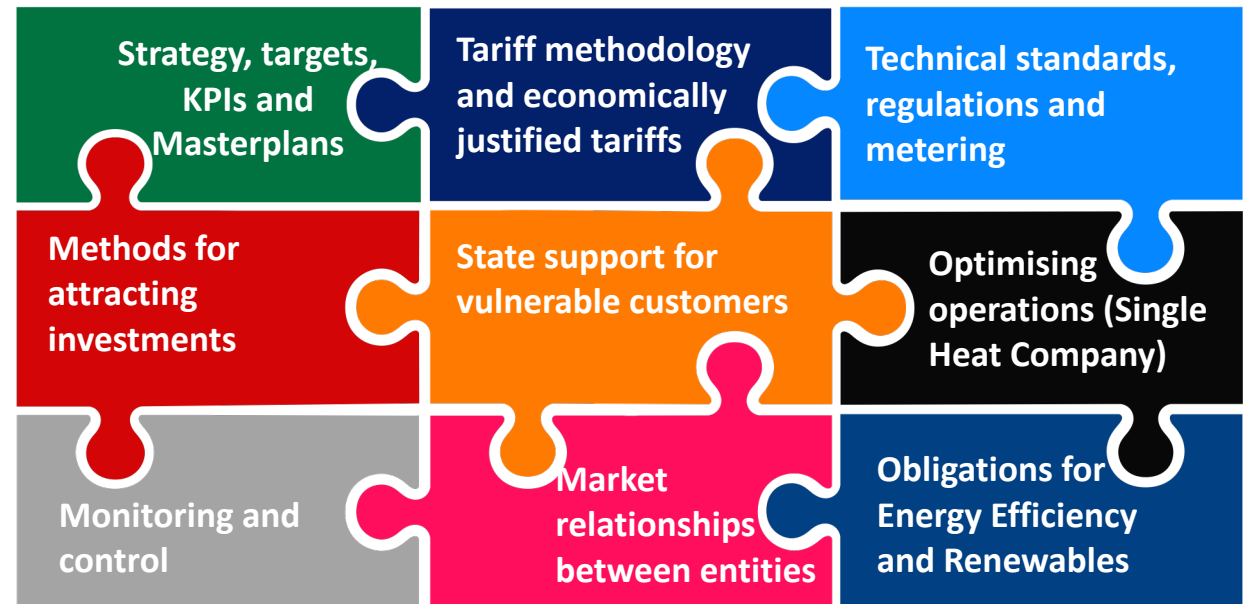
Lack of Mechanisms for implementing Energy Efficiency and RES



Areas of international experience most relevant to the challenges

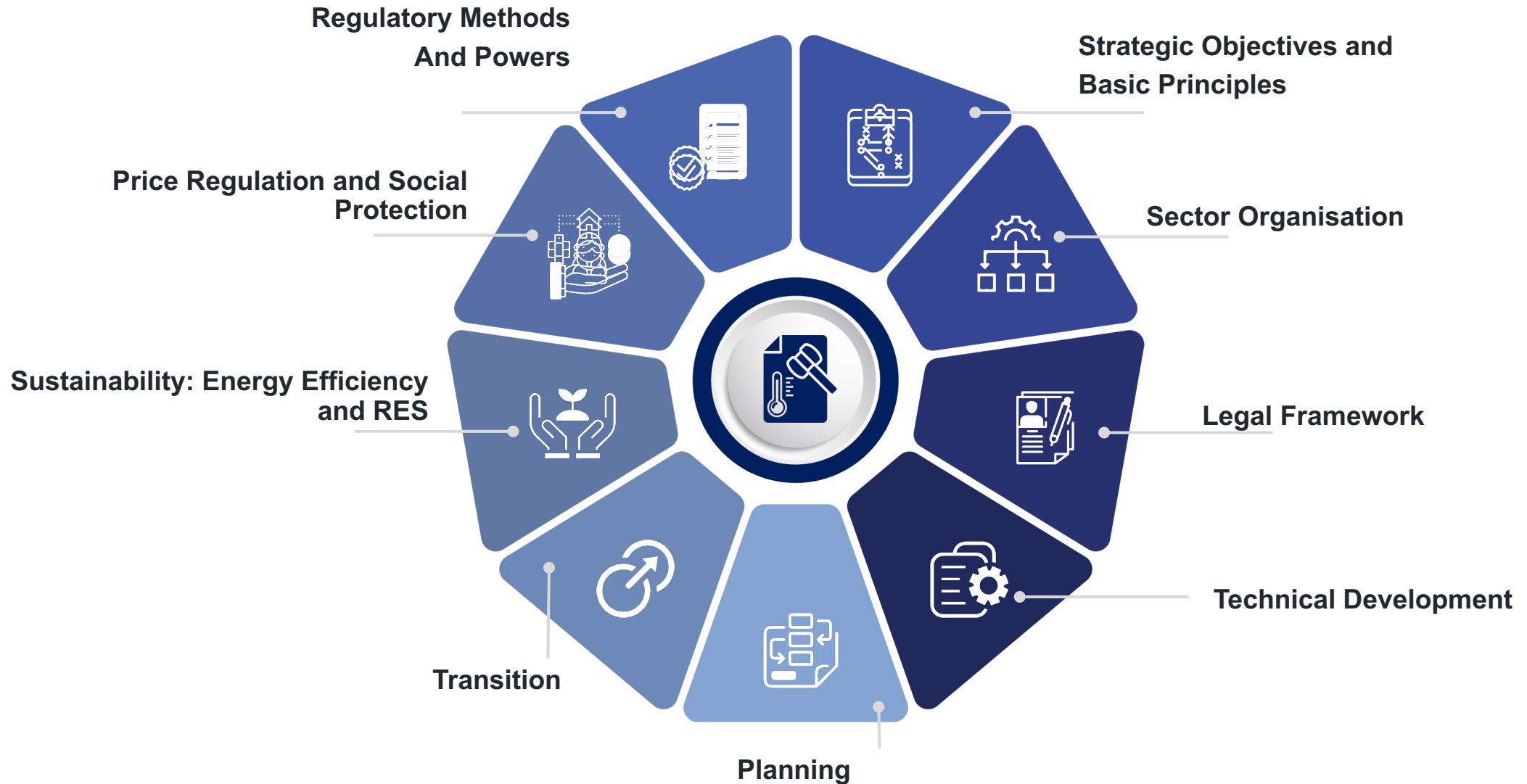
- Practical deployment of renewable heating
- Technical methods of increasing efficiency of heat production, transport, consumption
- Heat sector planning
- Models of PPP
- Heat tariff setting (regulation, structure, etc.)
- Practical implementation of support to vulnerable consumers
- Gender equality in the heat sector

Main components of the new legislation addressing the challenges

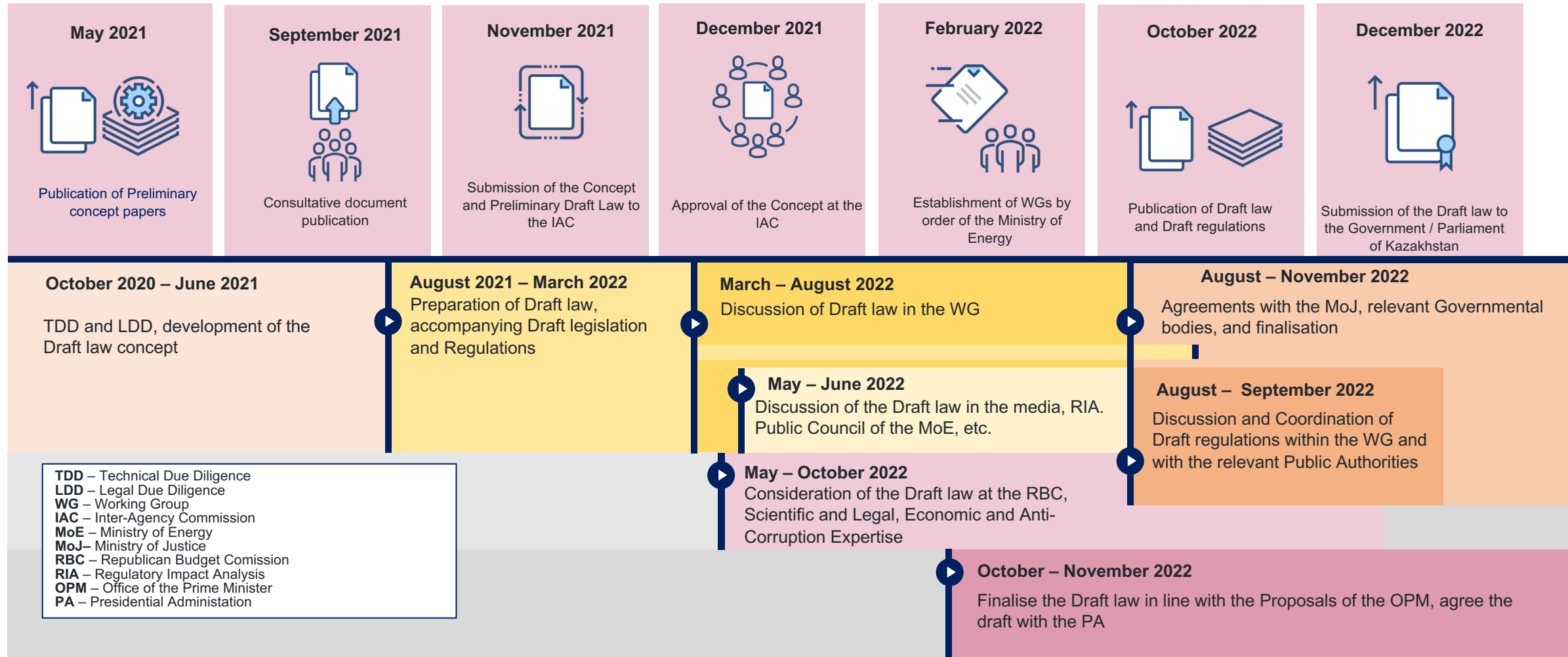


The project assisted the Kazakh counterparts to identify root causes of problems and develop solutions fitting the Kazakhstan situation. Knowledge transfer and capacity building provided systematic theoretical and practical knowledge on technical, economic and institutional aspects of modern heat sector

The new Law „On Heating“ – Content overview



Drafting Process



Dornier Group introduction

Project summary

The way forward for Kazakhstan heating sector

Improvement of Operation and Transition to a New generation for all segments of the Heat sector

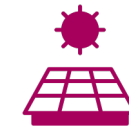
Public District
Heating System



Local District
Heating System

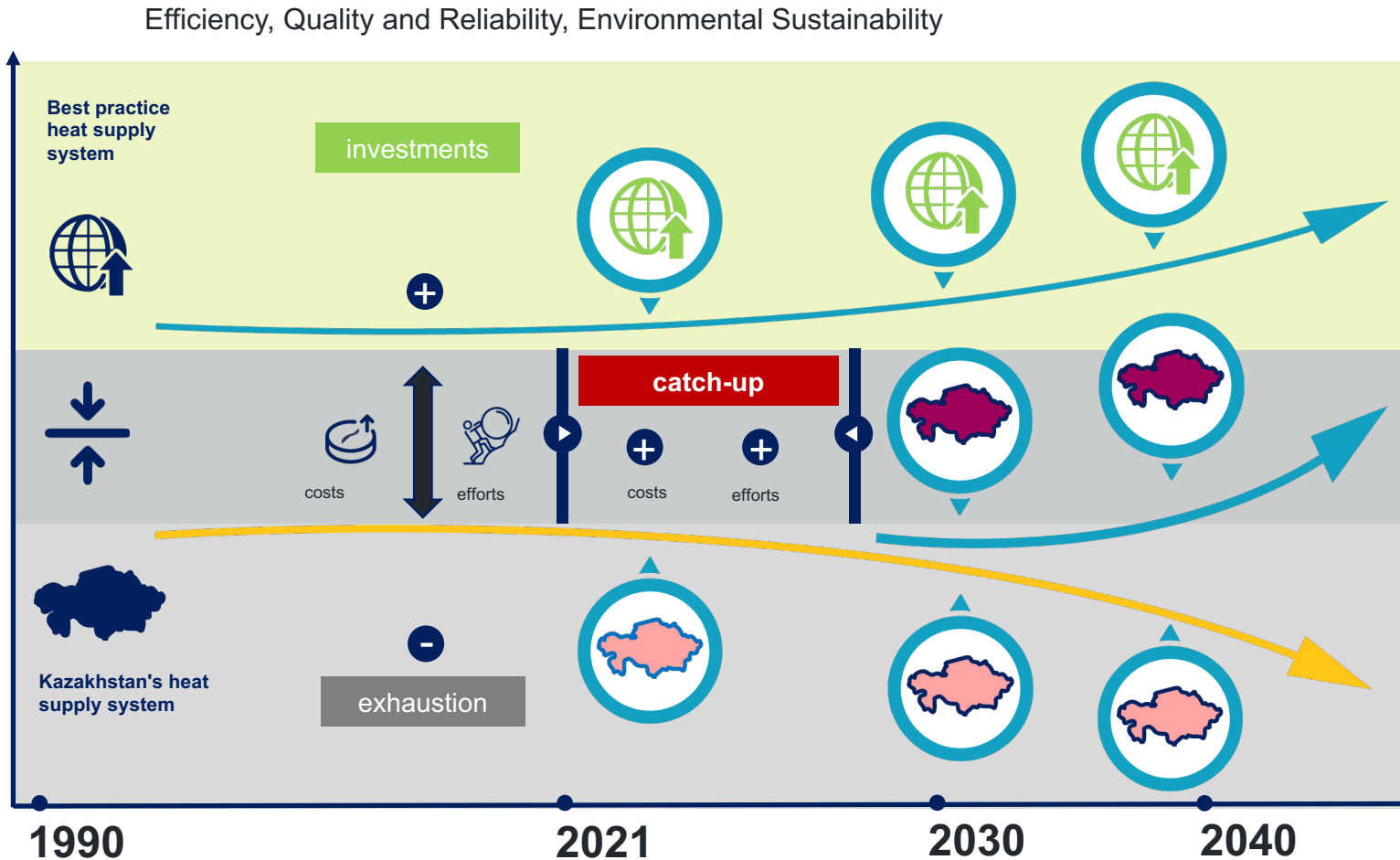


Individual Heat
Supply System



02 The task is huge

The challenge for the heat sector is to overcome the backlog caused by insufficient funding and misguided regulation over the past 20 years



Master Plans Optimise Investments and identify sources of Financing

Budget Funds Tariffs Green Funding

Private Partners and funds are attracted through **PPP** forms specifically **Adapted to the Heat sector**

Priority to consider a renewable energy alternative RES when replacing District heating sources

If there is a RES source in the District Heating system - use according to the principle of **least variable costs**

Support for investments through state programmes and promotion of PPPs

Incentives for measures **to reduce own needs, losses in heat networks**

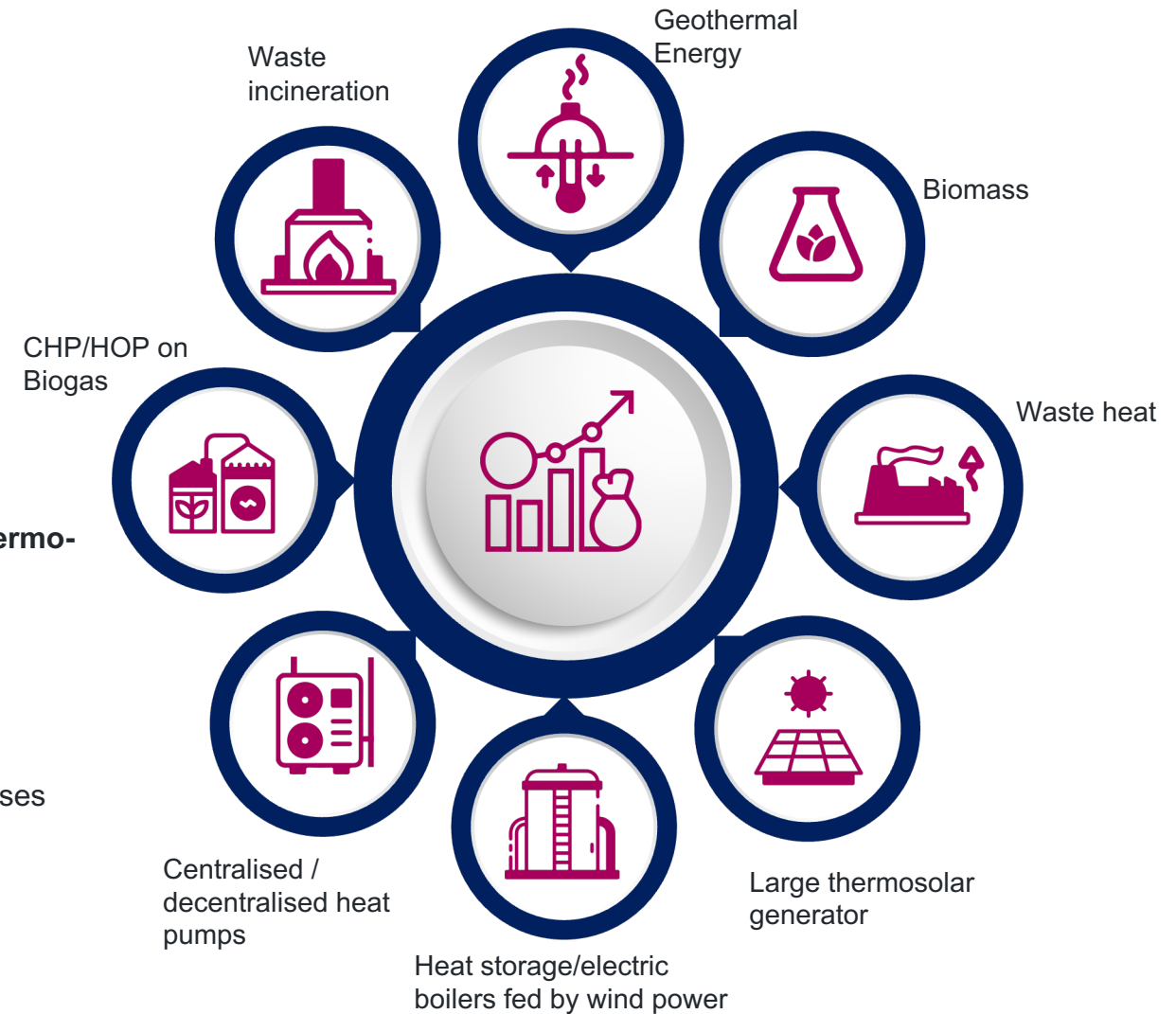
Optimisation of sources (base, peak capacity) **and connected consumers**

Conversion to a closed system and Individual Heat Points

Budget financing for planned **thermo-modernisation** of buildings

1. Public sector buildings
2. Multistoried buildings

State support for thermo-modernisation of private enterprises and houses



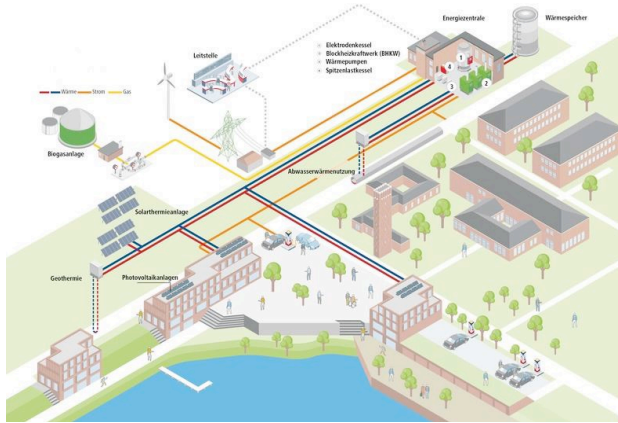


- **Ronald Rost**
- Dornier Power and Heat GmbH,
Head of International Sales
- ronald.rost@dornier-group.com
- Tel. +49 172 79 32 066



- **Kanin Silpa-Archa**
- Dornier Group Head of Region – South
East Asia
- kanin.silpa-archa@dornier-group.com
- Tel. +66636466690

Selected Heat Sector Reference Projects



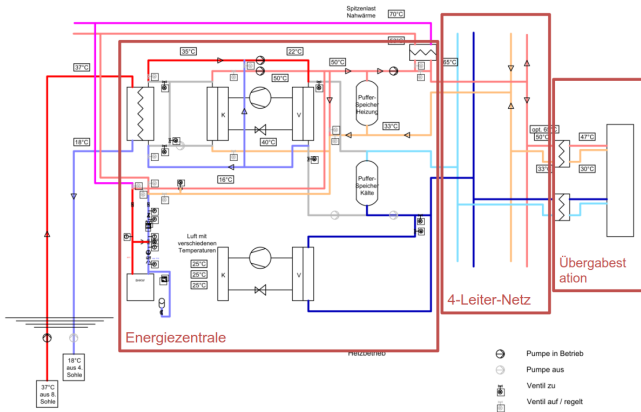
Architect/Engineer energy supply Potsdam-Krampnitz



Wilhelmsburg geothermal heating centre



District heat storage Berlin-Neukölln



Plants for heat and cooling supply with geothermal energy driven heat pump in Bochum



Efficiency increase and solar heat for the Lübeck Moisling district heating network



Demonstration plant Aquifer storage Tiefstack



Architect/Engineer for the Generation Strategy 2030



VENTURE THE IMPOSSIBLE
TO ATTAIN THE BEST...

PROF. CLAUDE DORNIER