



# Drinking Water Treatment & Bottling Process for Export

Water Cluster Export Strategy using Eco-friendly Kyrgyzstan Environment

2022.06



**In Water Solution Agro**

General Director of IWS Agro / Professor of SKKU  
/ Adviser of Prime Minister's Officer in Kyrgyzstan

**KIM, Ji-Hoon**





# Contents



**Bottling Process**



**Drinking Water Treatment**



**Export Strategy**





# Bottling Process

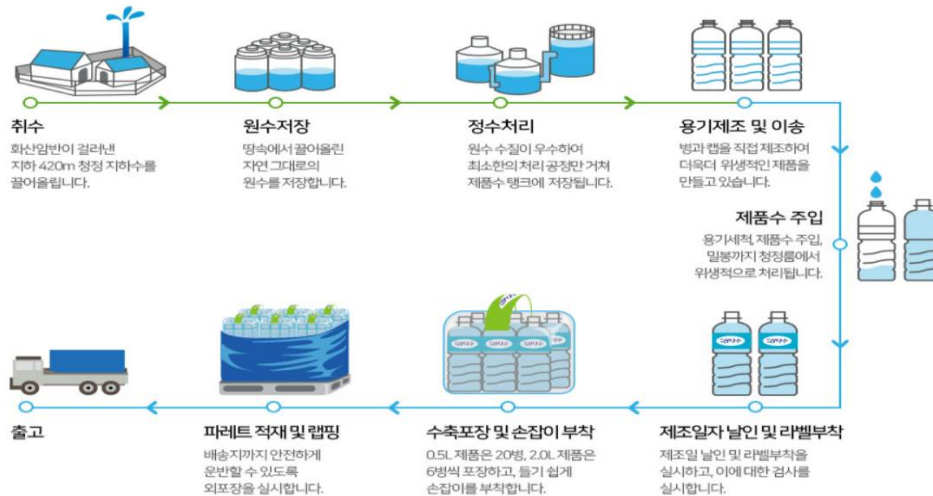


- Total Bottling Process
  - | 1<sup>st</sup> Step : Drinking Water Treatment Process
  - | 2<sup>nd</sup> Step : Bottling Process



# Bottling Process

## ● Whole Procedure of Bottling Process (PET bottle base)



Cap Production



Bottling Forming



Filtrate Injection



Bottling Inspection



Label Attaching



Shrink Wrapping



End Product Delivery



End Product Packing



End Product Transfer



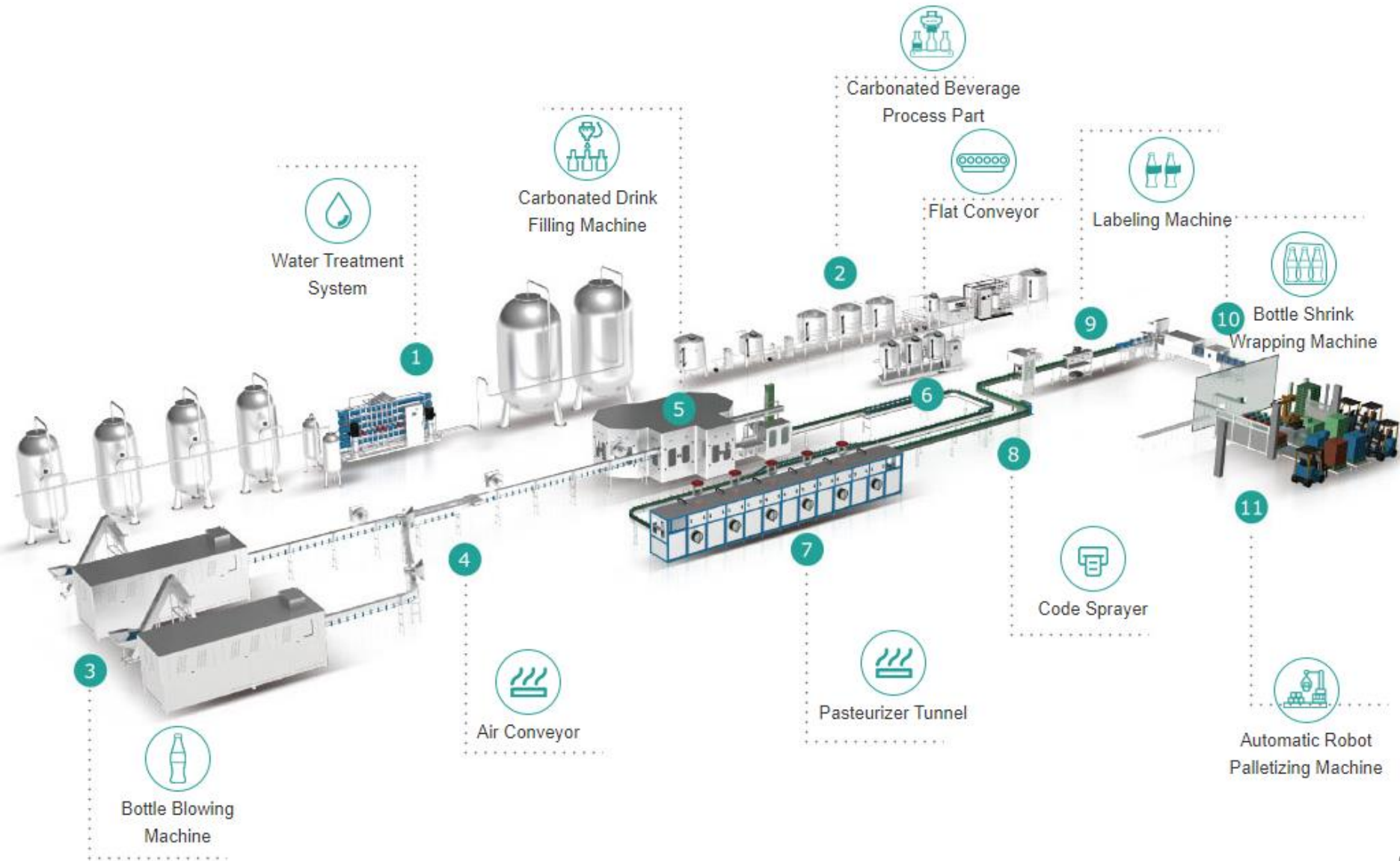
Knob Attaching





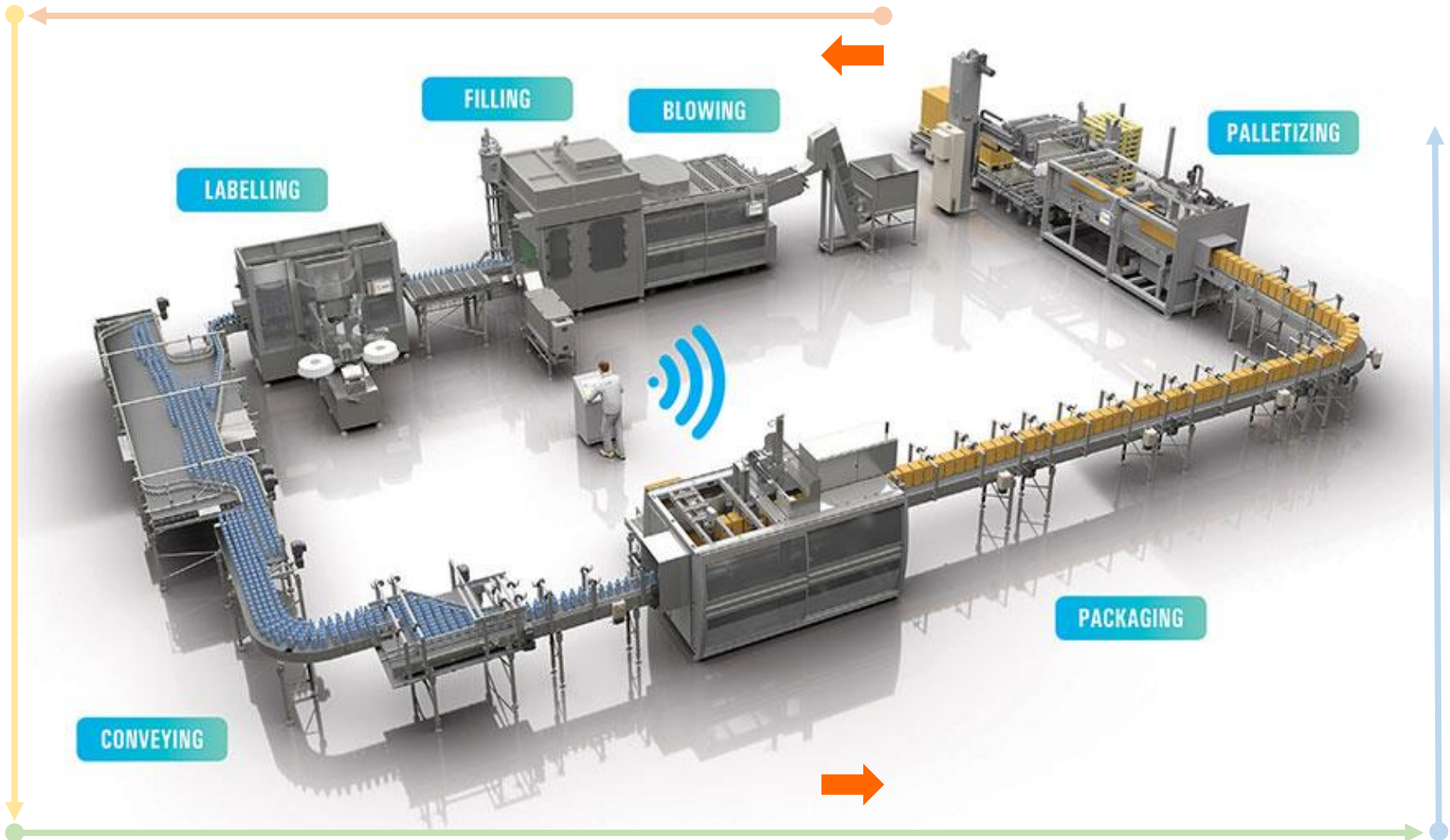
# | Bottling Process

- Whole Procedure of Bottling Process (Carbonated Water + PET bottle base)

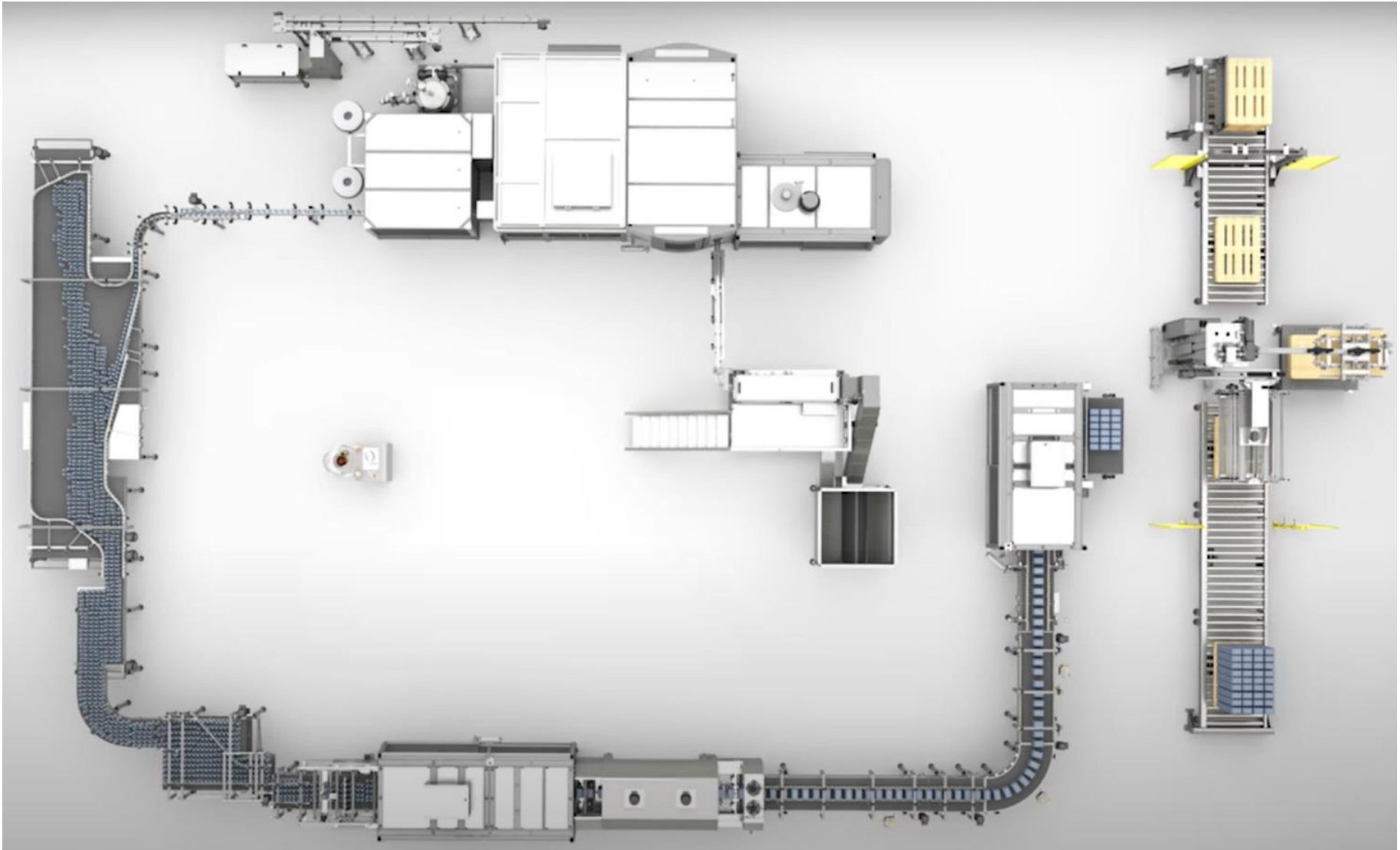


# | Bottling Process

- 2<sup>nd</sup> Step: Bottling Process (Main Process)



- 2<sup>nd</sup> Step: Bottling Process (**Main Process**)





# Bottling Process

- PET making Process : Preform Injection Mold, Blow Mold, Blow Machine



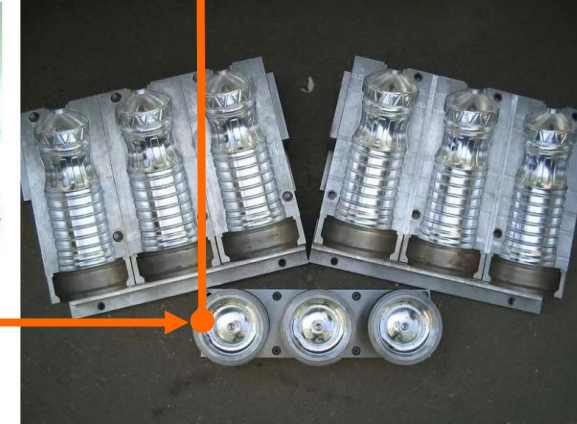
코어  
Core part



캐비티  
Cavity part



하트러너  
Hot runner part



- Bottling Main Equipment (PET base)

**Bottle Unscrambler**



**Blowing Machine**



**Filling Machine**



**Automatic Thermal Shrink Packing Machine**



- Bottling Main Equipment (PET base)

Single Side Sticker Labeling Machine



Shrink sleeve labeling machine



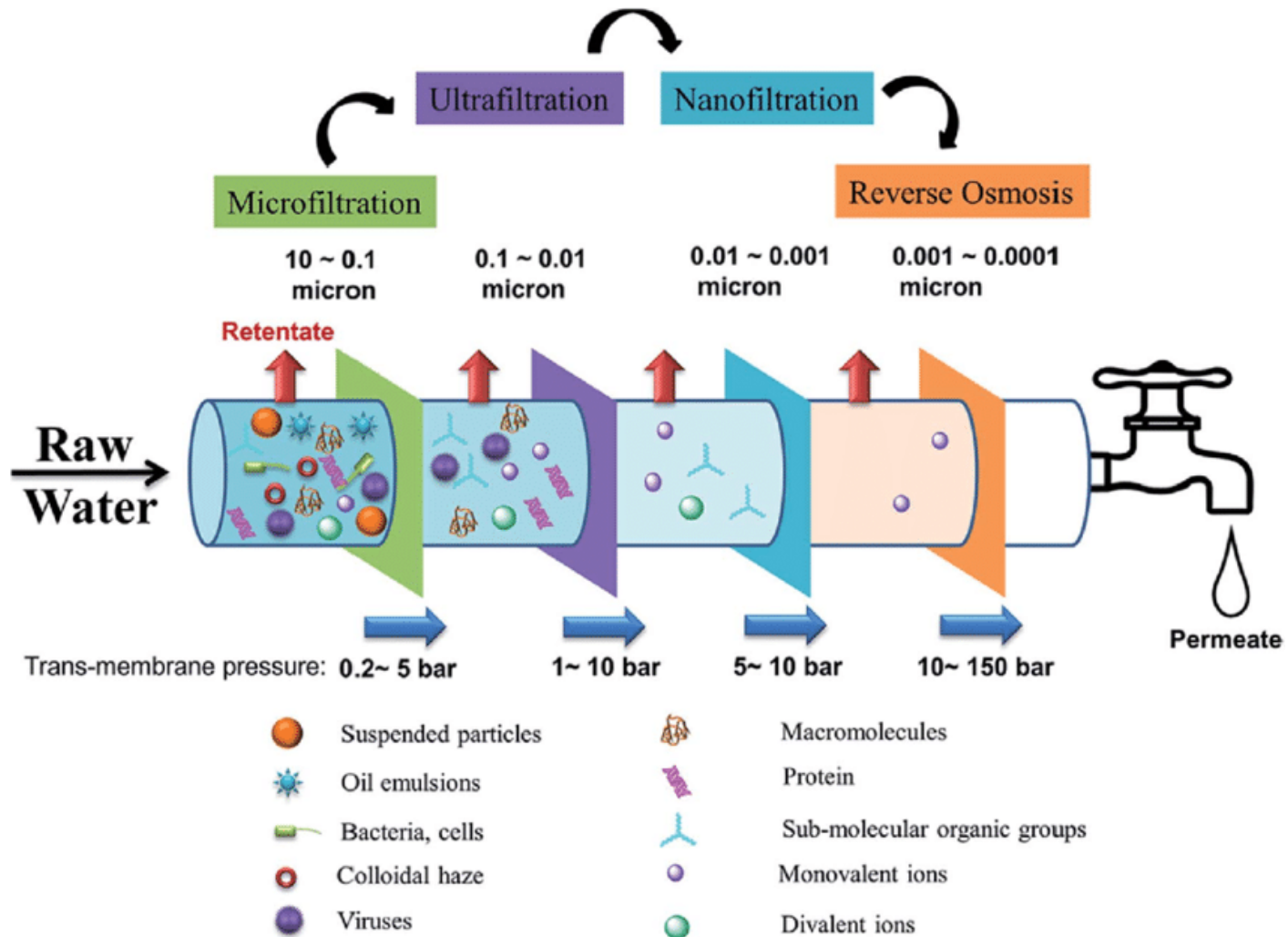


# Drinking Water Treatment





- Drinking Water Treatment Theory (1<sup>st</sup> Step)



- Drinking Water Treatment Process (1<sup>st</sup> Step)

- | 01. Raw Water Intake : Mountain (Eco Zone)

- | 02. Raw Water Tank (Pump)

- | 03. Silica Sand Filter

- | 04. Activated Carbon Filter

- | 05. Sodium Ion Exchanger

- | 06. Microfilter

- | 07. Reverse Osmosis

- | 08. UV

- | 09. Ozone

- | 10. Filtrate Water Tank

- | Chemical & Maintenance Equipment

- | Instrument & PLC Equipment



# || Drinking Water Treatment

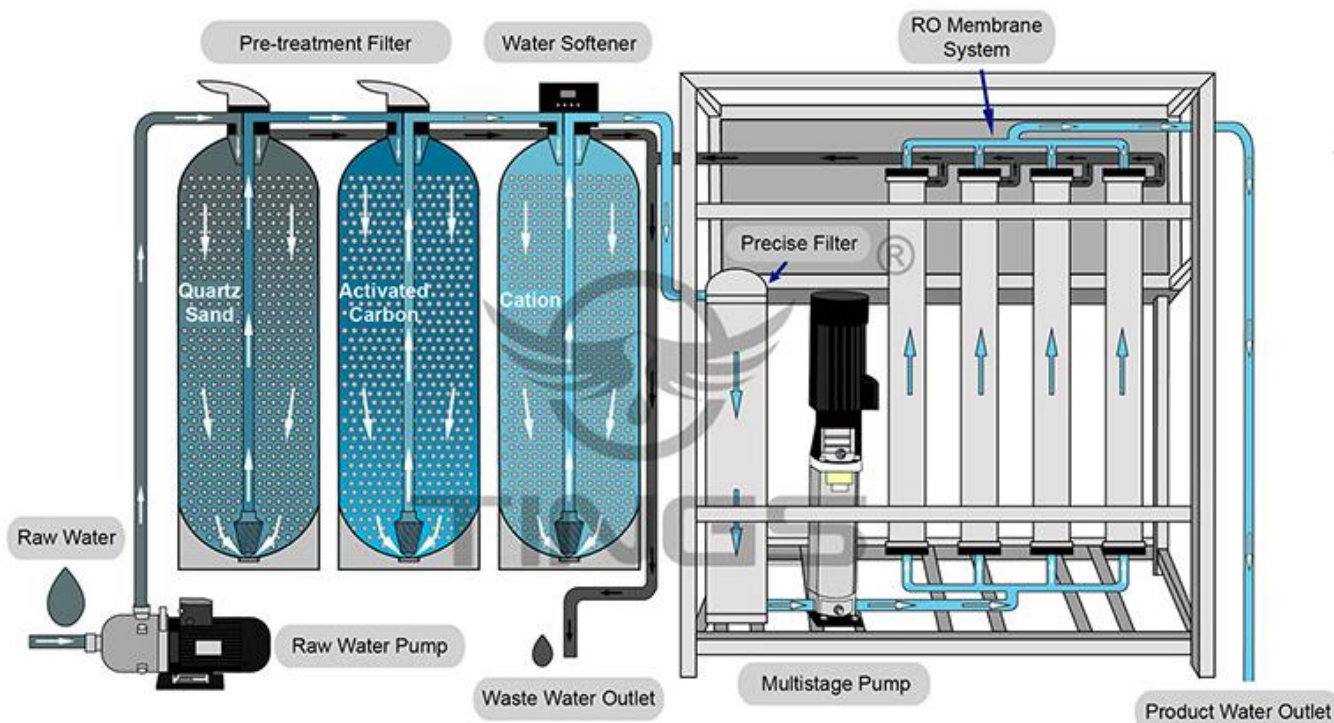
- Drinking Water Treatment Process (1<sup>st</sup> Step)

- | Intake : Well pump, Raw water Tank

- | Pre-treatment : Silica Sand Filter, Activated Carbon Filter, Sodium Ion Exchanger

- | Main-treatment : Microfilter, Reverse Osmosis

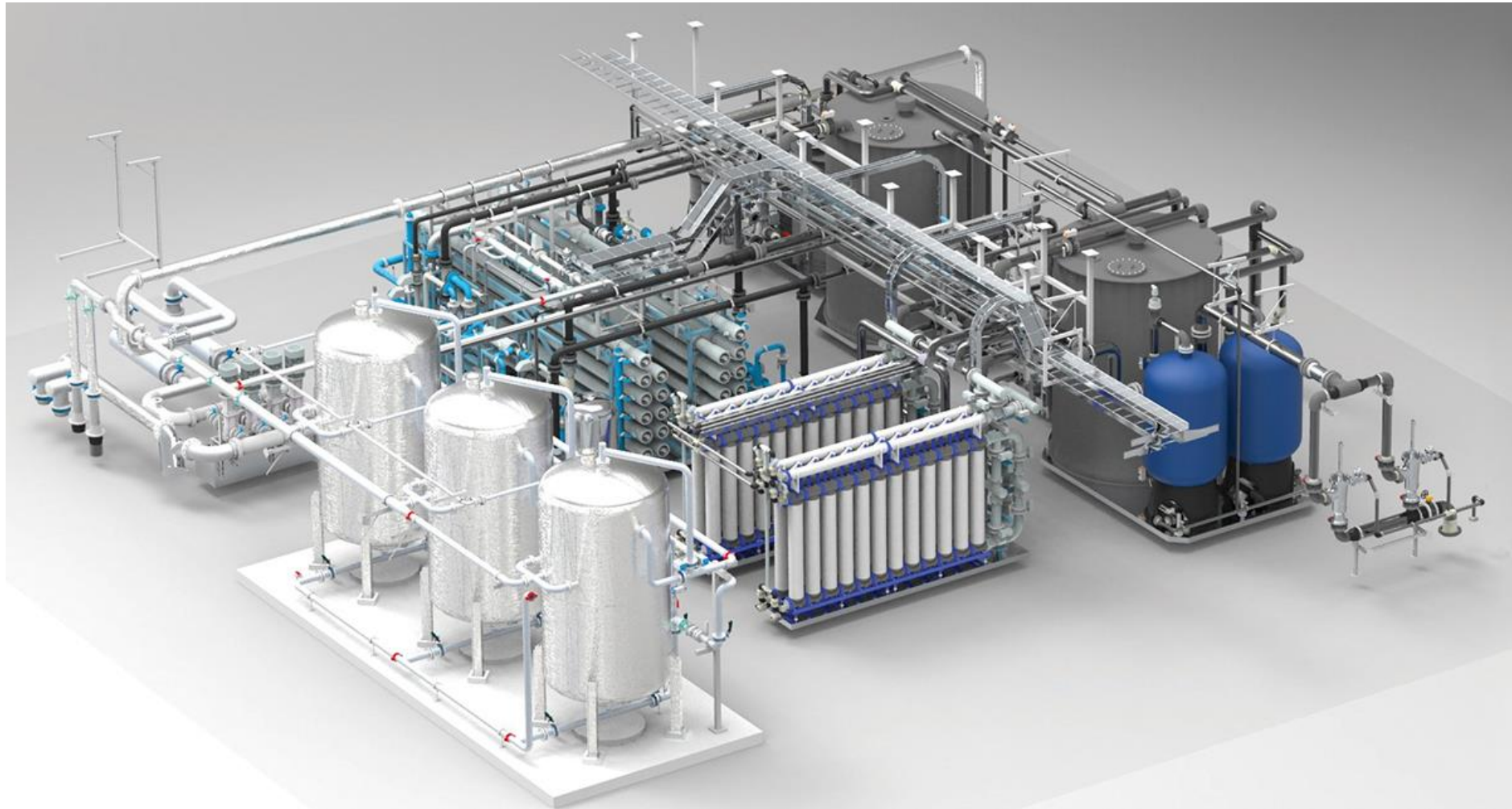
- | Post-treatment : UV, Ozone, Demineralization, Filtrate Tank





- Drinking Water Treatment Plant (1<sup>st</sup> Step)

| Membrane Technology base : Ultrafiltration + Reverse Osmosis





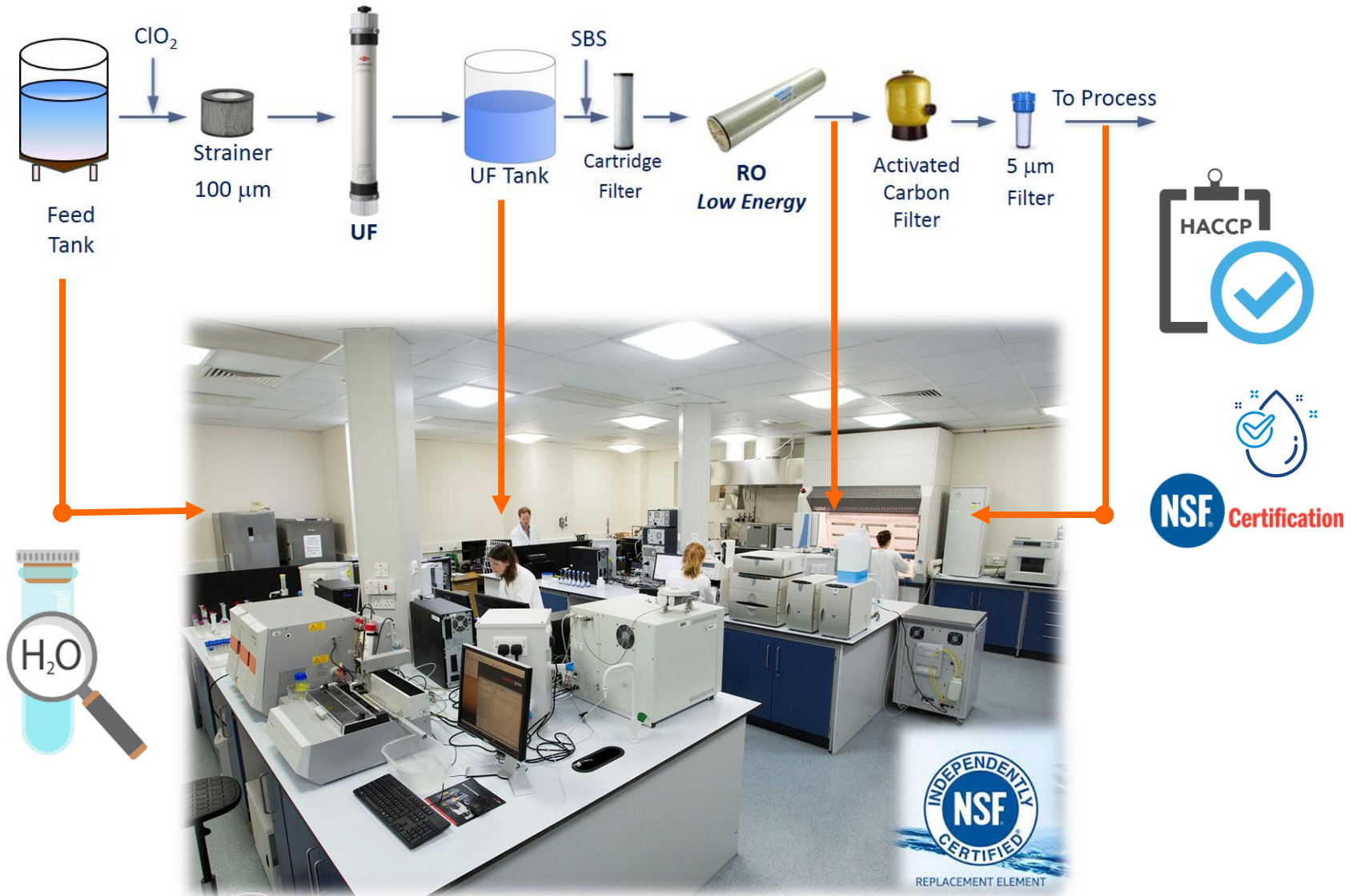


# Export Strategyc



- Eco-friendly Kyrgyzstan Brand
  - | Mountain (Eco Zone)
  - | Water Qualities
  - | Kyrgyzstan Environment
- High Technology Plant for Bottle Export
  - | EU, South KOREA (NO China)
  - | Automation Plant (Clean Plant)
  - | Membrane Technology
  - | Good Infra & Utilities (Truck, Fork Lift, Machine, Store Room)
  - | Water Analysis Lab, NSF, HACCP, Certificate
- Site Survey (22 June 2022) : SAEL vs Kyrgyzstan Standard
  - | **SAEL** : Private, Kara Balta, 150 persons, UK (England) Certificate
  - | **Kyrgyzstan Standard** : Public Official of MOE, Bishkek, 7 persons, Russia Loan (2021)
  - | Output Independence, Site Accessibility, Manpower Expertise, Profitability & Sustainability
  - | Maintenance Efficiency, Future Expandability, Regulation Connectivity & Obligation
  - | **Versatile Analysis Laboratory** : Water, Agro (Soil), Air, Pesticide, Compost, Food, Quarantine

- Water Analysis & Certificate (HACCP, Global Bottling Water Regulation, Kyrgyzstan Drinking Water Standard)



- Bottling Plant Video

<https://www.youtube.com/watch?v=9lxrCKwwGKY>

<https://www.youtube.com/watch?v=irf3gYmRMbU>

- Bottling Process Video

[https://www.youtube.com/watch?v=N\\_u9eBF\\_d80](https://www.youtube.com/watch?v=N_u9eBF_d80)

<https://www.youtube.com/watch?v=7AuHQRQzdbU>

[https://www.youtube.com/watch?v=4y\\_adRAIasw](https://www.youtube.com/watch?v=4y_adRAIasw)

- Premium Bottling Marketing Video

<https://www.youtube.com/watch?v=MbL9ID9LwIk>

<https://www.youtube.com/watch?v=neZgS5-ckEc>



- Definition of Water Cluster
- Configuration of Water Cluster
- Incentive of Water Cluster
- Expected Effect of Water Cluster
- Future Plan (Road Map) of Water Cluster

# Thank you for your attention

