



Andritz Technologies Ltd. China

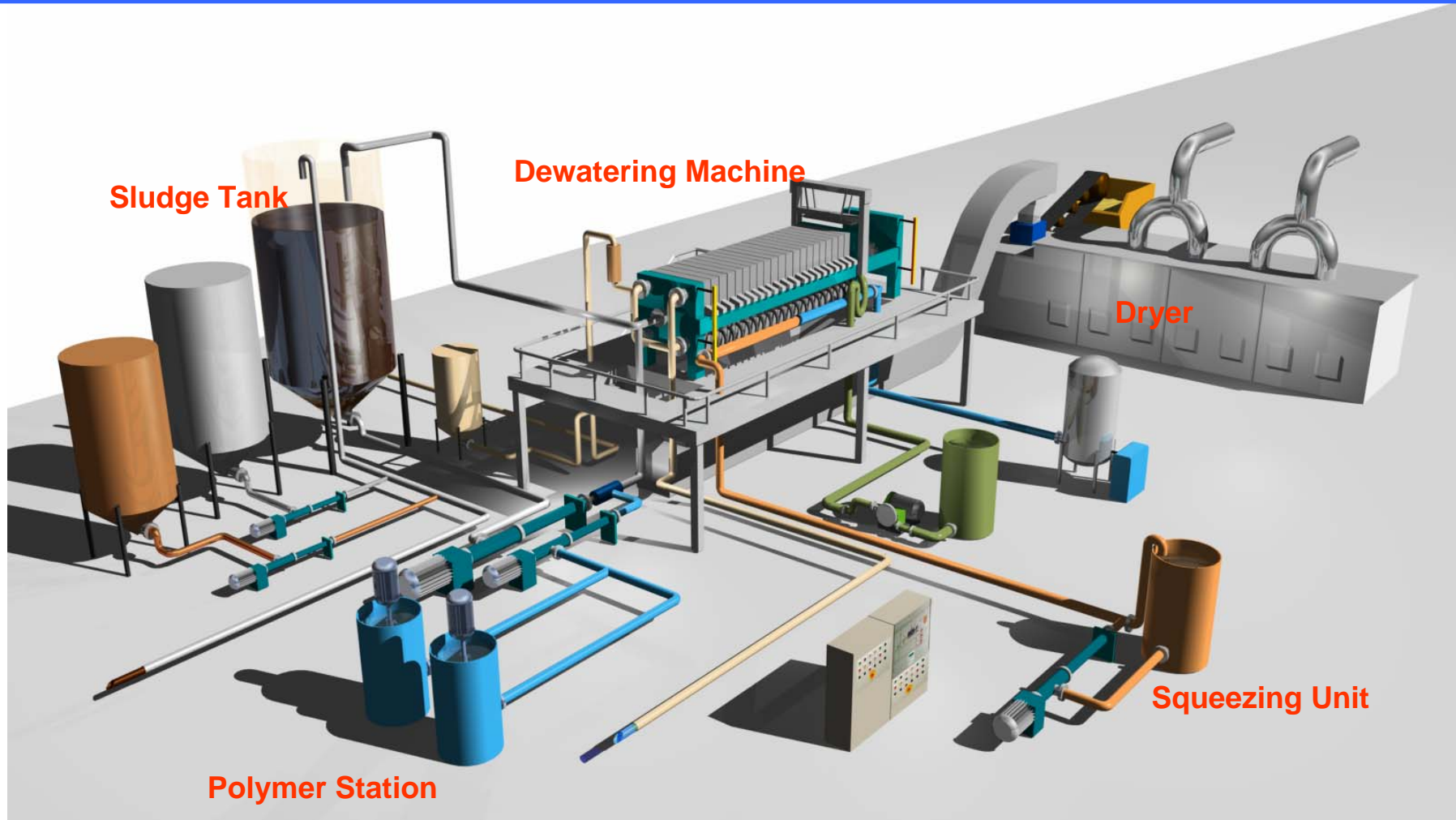
# A View from the Chinese Waste Water Treatment Market



Presented by  
Sun Hongjuan

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# Supply of complete engineering and equipment solutions



# Andritz's products for solid-liquid-separation

Reduce - Recycle – Detoxification  
Reuse



Municipal waste water treatment  
Sludge from water plants  
Industrial waste water treatment

**ANDRITZ**

# Chinese waste water treatment market overview

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## Market volume (2008):

Waste Water: approx. 57.2 billion t/yr

1. Municipal – 33.01 billion t/yr

2. Industrial – 24.19 billion t/yr

→ Dry Solid Content: approx. 9.0 million t/yr

## Treated municipal waste water (pipe net)

2001: 10%

2006: 57%

2007: 62%

2008: 66% (expected 70%)

## Competitive advantage / disadvantage

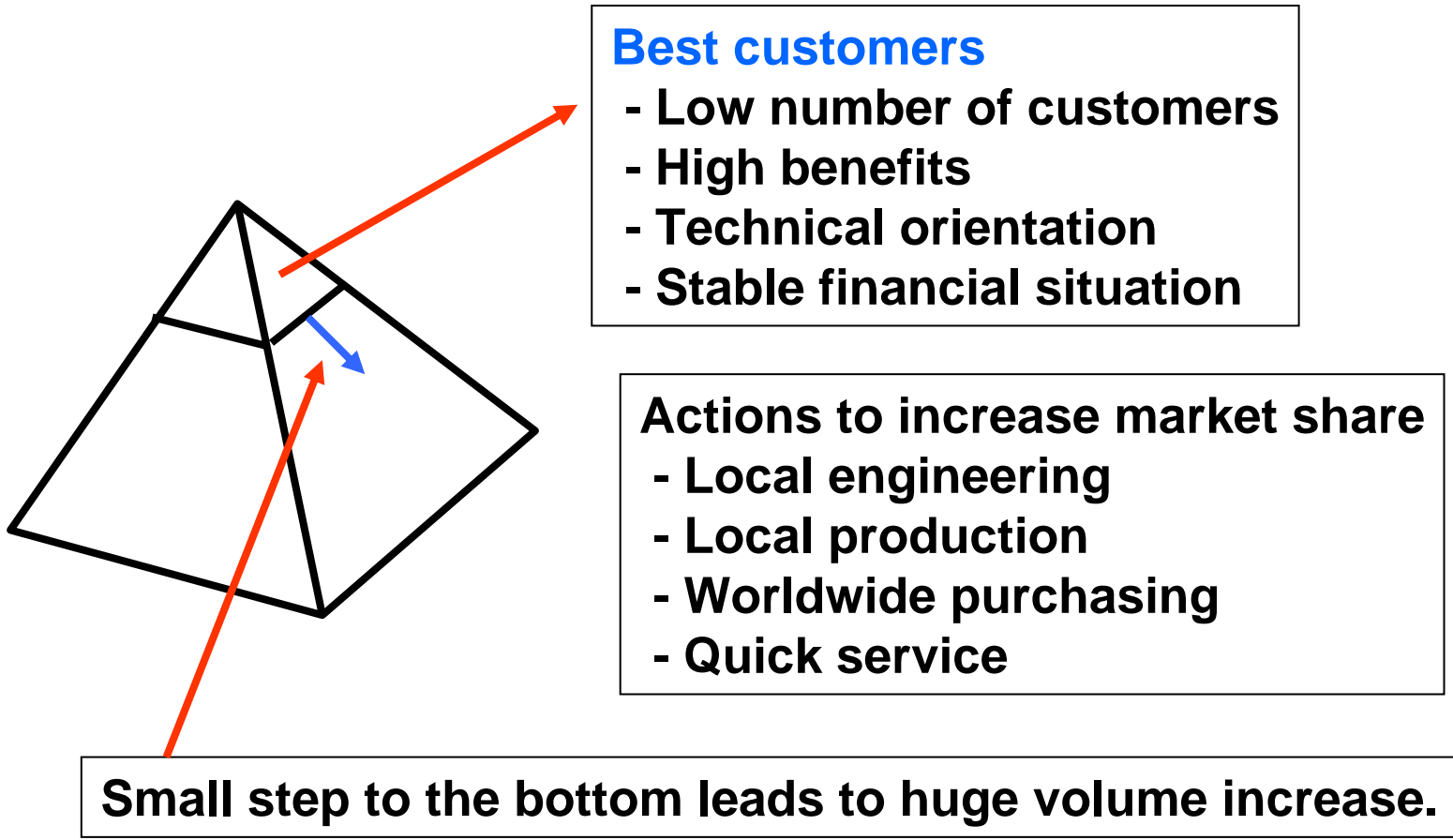
### Competitive position of foreign vs. domestic technology

- |                        |       |
|------------------------|-------|
| 1. Quality             | (+)   |
| 2. Reliability         | (+)   |
| 3. Individual Solution | (+)   |
| 4. Price               | (-)   |
| 5. Service             | (+/-) |

### Existed Problems of the Chinese WWT market:

1. Financial problem
2. Unspecified choice of the treatment process
3. Secondary pollution of treated sludge

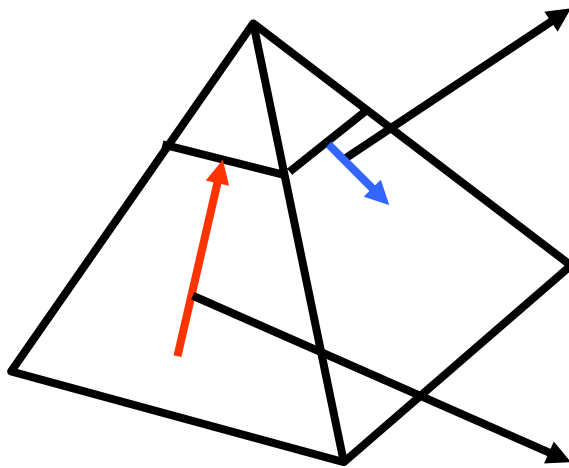
# Customer Segments



# Competition

## Tendency of international companies

- Localization
- Worldwide purchasing



## Tendency of domestic companies

- Quick technology progress
- Copying of imported machines
- Intelligent solutions

# Chinese waste water treatment market development

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## Factors driving the increase of waste water volumes

Workshop of the world → dramatic increase of waste water

Economic development → increase of waste water

Environmental protection → untreated waste water

Resource exploitation → negative for sustainable development

## Interests of Chinese population

- Strong wish of civilians and the government for a green environment
- The government is the main investor in environmental projects
- Strict supervision by government authorities leads to investment by companies

# Geographical market segmentation

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## Market at present

Relatively well developed areas with high population

- Coastal zones
- Big rivers / lakes zones
- Largest cities

Developing areas with the support of government subsidies

## Market in the near future

Developed areas → developing areas

City → countryside

Reduction of waste water volume

## Facts & figures

**Waste water treatment plants are mainly in the largest cities and the coastal areas**

	<b>No. of Municipal Water Plant</b>	<b>Remarks</b>
<b>1969</b>	<b>approx.10</b>	<b>incl. 3 plants from 1921 and 1926</b>
<b>1986</b>	<b>60-80</b>	
<b>1999</b>	<b>472</b>	
<b>2008</b>	<b>1521</b>	<b>About ¼ out of operation</b>

# Purchasing Power

	Income RMB/Year	Income RMB/Year	GDP x 10 <sup>18</sup> RMB
	Rural residents	City residents	Total
2000	2,000	5,800	1.34
2003	2,622	8,500	2.17
2005	3,255	10,493	3.16
2006	3,587	11,759	3.94
2008	4,761	15,781	6.13
Increase 2000/08 by	2.38 times	2.72 times	4.57 times

The government has to invest the environment projects.

## Solutions for increasing the market potential

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- 1. Enhance strict supervision by government authorities**
- 2. Government subsidies**
- 3. Increase water rate (incl. WWT)**
- 4. Find new financial resources**
- 5. Cooperation with foreign governments, organizations and enterprises**

**Chinese scale → huge potential**

- Biggest cities**
- Middle cities**
- Small cities**
- Countryside**

# Intellectual property rights protection

<b>Intellectual Property</b>	<b>Solution</b>	<b>Limitation</b>	<b>Remarks</b>
<b>Illegal Copy</b>	<b>Legal process in China</b>		
<b>Copy of EU/USA/... patents</b>	<b>Legal process abroad</b>	<b>Export business</b>	<b>Not valid in China</b>
<b>Copy of Chinese patents</b>	<b>Legal process in China</b>		
<b>Newly registered Chinese patents of existing foreign patents</b>	<b>Legal process in China</b>		<b>Only for propaganda / Resistance of Chinese competitors</b>

# Conclusion

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- 1. The Chinese society and government are strongly interested in protecting and improving the environment**
- 2. Big investments over the last 10 years have lead to obvious progress**
- 3. For almost every supplier and investor there are business opportunities**
- 4. Localization plays a very important roll, because of price and service**
- 5. As main investor the Chinese government searches new investment sources**
- 6. The Chinese government is willing to exchange foreign high technology against the Chinese market**
- 7. The protection of intellectual property rights will remain an issue in the near future**



# Thank you for your attention!

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