



WATER TREATMENT SOLUTIONS

A - Z

- ❖ ***Market forecast (2014 - 2020)***
- ❖ ***New Treatment Methods***
- ❖ ***Our Objective***
- ❖ ***Brief description of Watch® Solutions***

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Watch[®]

Solves Major Water Treatment Concerns

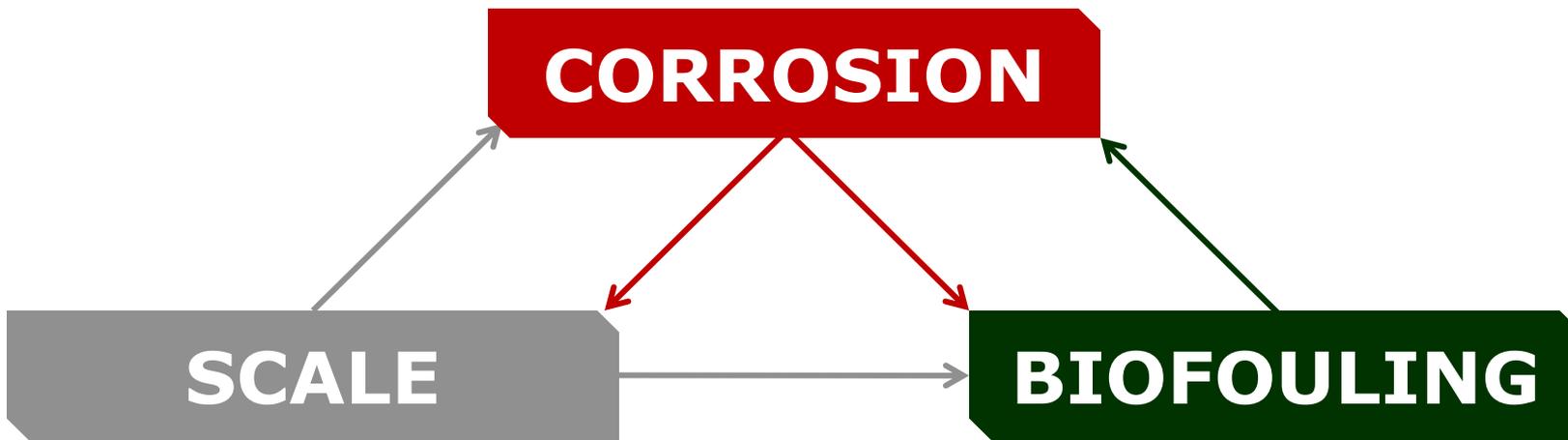


Fig1: The cause-effect diagram of the major problems

This presentation forecasts the Total Water Treatment Market (2014 - 2020) to Grow at a rate of 8 percent over the period of six years. One of the Key factor contributing to this MARKET GROWTH is the water demand exceeding the water supply.

Addressing the Problems

The world's water treatment demands on Green Chemicals has also been increased. However, how to bring these chemicals safe, without water is a big issue which could pose a challenge to the growth of this market. Watch[®] knows how to do it with **INSTANT DOSING PRODUCTS.**

Watch[®] knows the answer to the following questions

- ❖ What will be the market size in 2014 ?
- ❖ What will be the growth rate ?
- ❖ What are the key End-users' Trends?
- ❖ What is driving this market ?
- ❖ What are the challenges to market growth ?
- ❖ What are the market opportunities ?
- ❖ What are the Strengths of vendors ?
- ❖ What are the weaknesses of vendors ?

You can request these answers. Please send your request and we will provide you the detailed answers.

Suspended solids and sediments, turbidity reduction.
Reduction of organics, bacteria, color, odor. Removal
of Iron, Manganese, Lead, Copper, Zinc and other
Heavy Metals. Efficient reduction of **Arsenic** and
radio nuclides.

KL

Filtration

Hydrogen peroxide in stabilized solid form

OXYDES

Oxidizer

Superior Calcium carbonate protection,
No Regeneration, no waste water and
no chemicals needed.

SP3

Scale Prevention

**Non-phosphate,
dissolves calcium phosphate,
Superior Corrosion Control
Oxygen scavenger, Biocides
Descaling, Cleaning and
Disinfection**

I-SOFT + ADDITION

Stabilization of Anions

Feed and Control Systems

Best Performance products for Market

In 2014 - 2020

Successful Water Treatment requires

- ✓ Proper Pretreatment and makeup water
- ✓ Proper Scale Prevention
- ✓ Proper Dispersant
- ✓ Proper Oxidizing agents
- ✓ Proper Biocides
- ✓ Proper Oxygen Scavengers

Our Objective

To eliminate the use of **Unsuccessful Chemicals** in Water Treatment!

Chemicals		Used as/for
<ul style="list-style-type: none"> • Chlorine • Potassium permanganate 	(Cl) (KMnO ₄)	BIRM Filters Greensand Filters Greensand Plus Filters
<ul style="list-style-type: none"> • Brine/Salt • Sodium chloride 	(25% NaCl) (100% NaCl)	Water Softeners Ion-Exchange Systems
<ul style="list-style-type: none"> • Hydrochloric Acid 	(33% HCl)	Demineralization (Cations) pH adjustment, RO Treatment Boiler cleaning, Heat exchangers
<ul style="list-style-type: none"> • Sulfuric Acid 	(98% H ₂ SO ₄)	Decarbonization (Cations) Waste Water, Clarifiers
<ul style="list-style-type: none"> • Caustic 	(50% NaOH)	Demineralization (Anions) Clarifiers, pH adjustment
<ul style="list-style-type: none"> • Phosphates, Phosponates, EDTA, NTA 	PO ₄ *	Dosing chemicals for Boilers, Cooling Towers, Reverse Osmosis and Soap and Detergents.
And, and ..etc etc.		

What can be done? And how quickly?

**main functional group*

What's the impact of these chemicals on Earth, Water and Air?

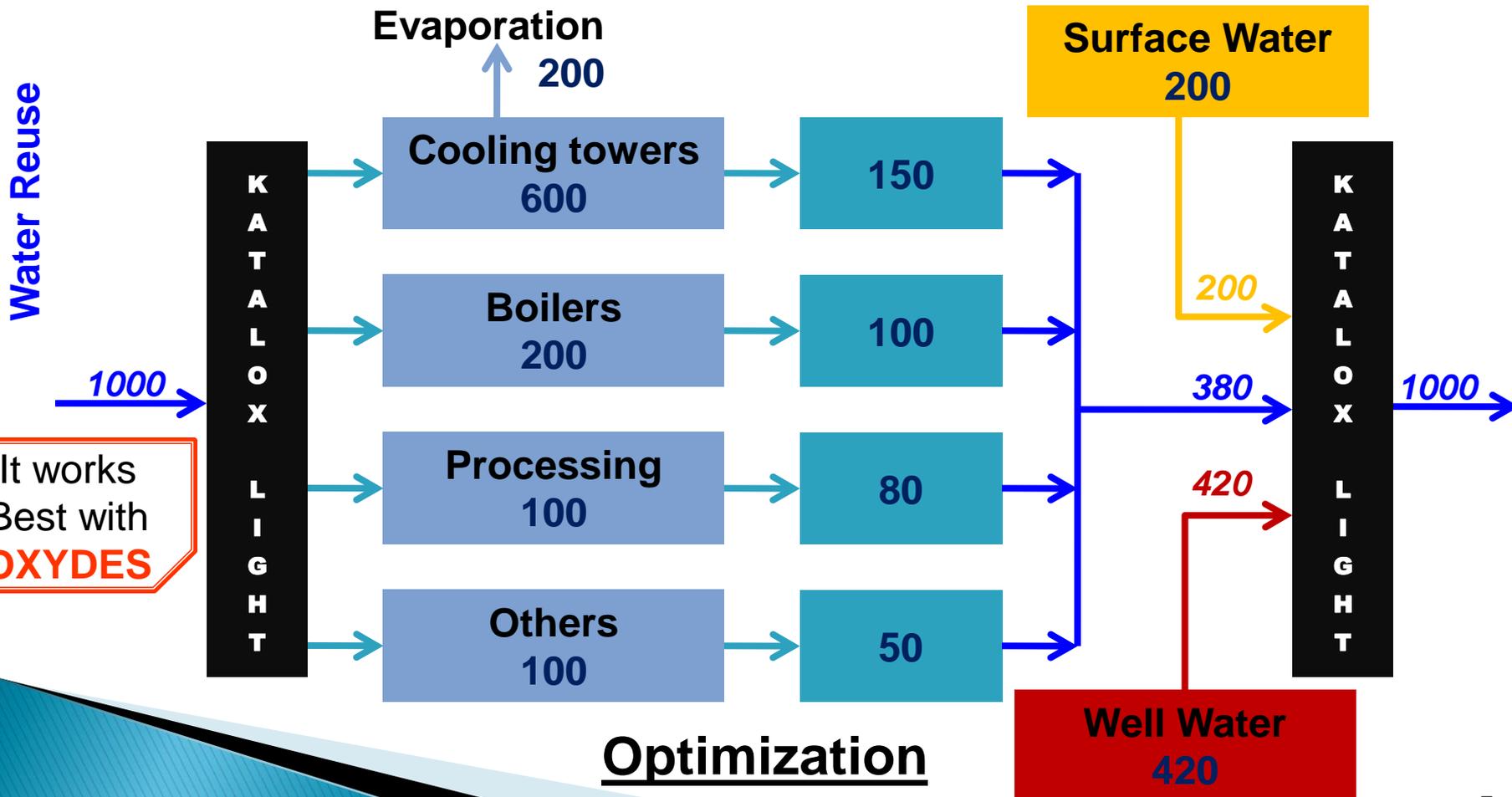
SHIFT

Yesterday, Today

Shifting to

Future Water Treatment Technologies

“Meeting the needs of the present without compromising the ability of future generations to meet our New Technologies” – Alternative Water Treatment



Water Reuse

Think about Water Reuse with Katalox Light Filtration and from Low-to-High quality water:

Users of:

- Cooling Towers
- Process Washes
- Fire Water Systems
- Hot Water Boilers
- High Pressure Boilers
- Low Pressure Boilers

**KATALOX
LIGHT**

Sources

- ❖ Condensate
- ❖ Boiler blow down
- ❖ Cooling tower blow down
- ❖ Process Sewers
- ❖ Waste Plants (treated)

And many more

Drinking Water From the following resources

- City Water
- Well Water
- Surface Water
- Rain Water
- Lagoon Water

**KATALOX
LIGHT**

Removing:

Suspended solids, sediments, turbidity, organics, bacteria, color, odor, Iron, Manganese, hydrogen sulfide, Lead, Copper, Zinc and other Heavy Metals. Efficient reduction of **Arsenic** and radio nuclides



Watch The Golden Rule

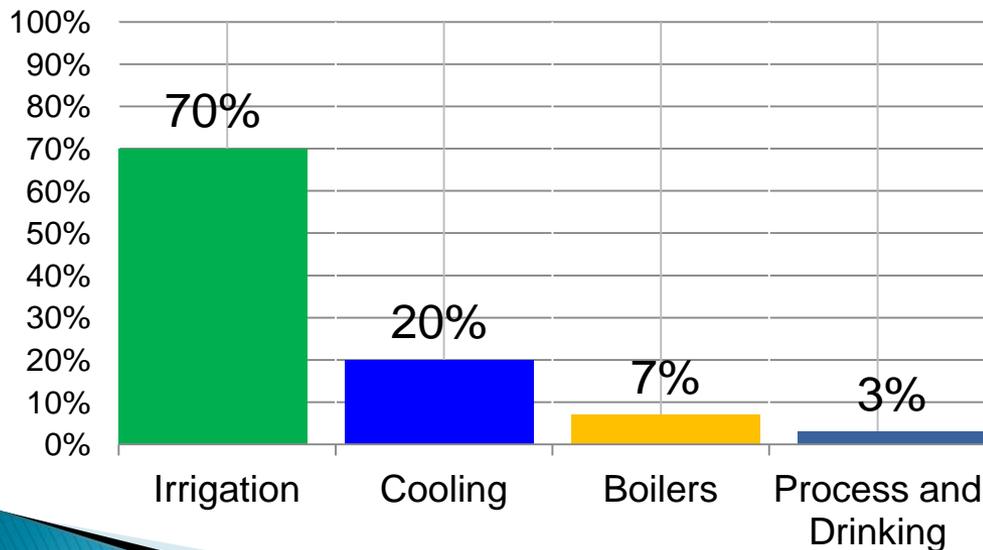
Maximize circulation of cooling water before blow down... and avoid Anion Scaling if possible with **I-SOFT® OB** (Oxidizing Biocide) and **I-SOFT® NB** (Non-oxidizing Biocide)

Three in One, INSTANT Dosing Powder

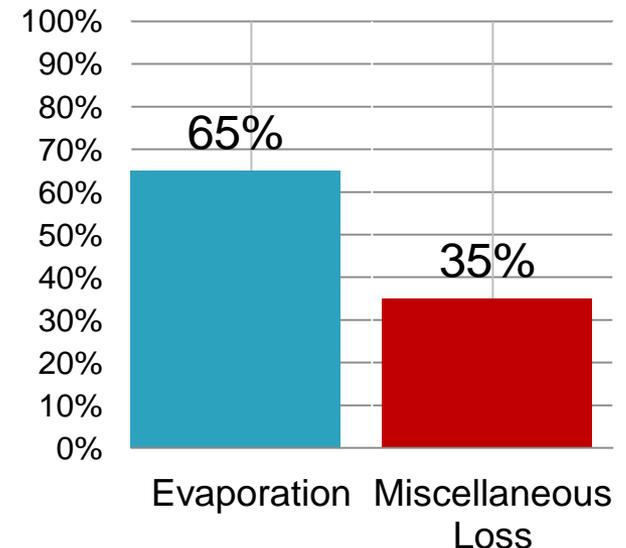
Everything starts with **Katalox Light** Filtration and Removal

World Water Usage And Water Balance

Recycle Resources



Non-Recoverable



Recycle Resources

- ❖ Process Wash Waters
- ❖ Reverse Osmosis Reject Water
- ❖ Boiler Blowdown
- ❖ Cooling Towers Blowdown
- ❖ Industrial Waste Water Effluent
- ❖ Municipal Waste Water Effluent

Scale Prevention

FILTERSORB SP3

- **Filtersorb SP3** has 98% efficiency to treat intake water without regeneration, backwash and chemicals
- Older RO plants are designed with Ion Exchange system which produce waste water, high salt water discharge and cannot be reused.
- RO plants at 75% recovery using **Filtersorb SP3** and **I-SOFT RO** Antiscalant is only 4 times cycle water and very easy to reuse as cooling water makeup.

Katalox Light Filtration

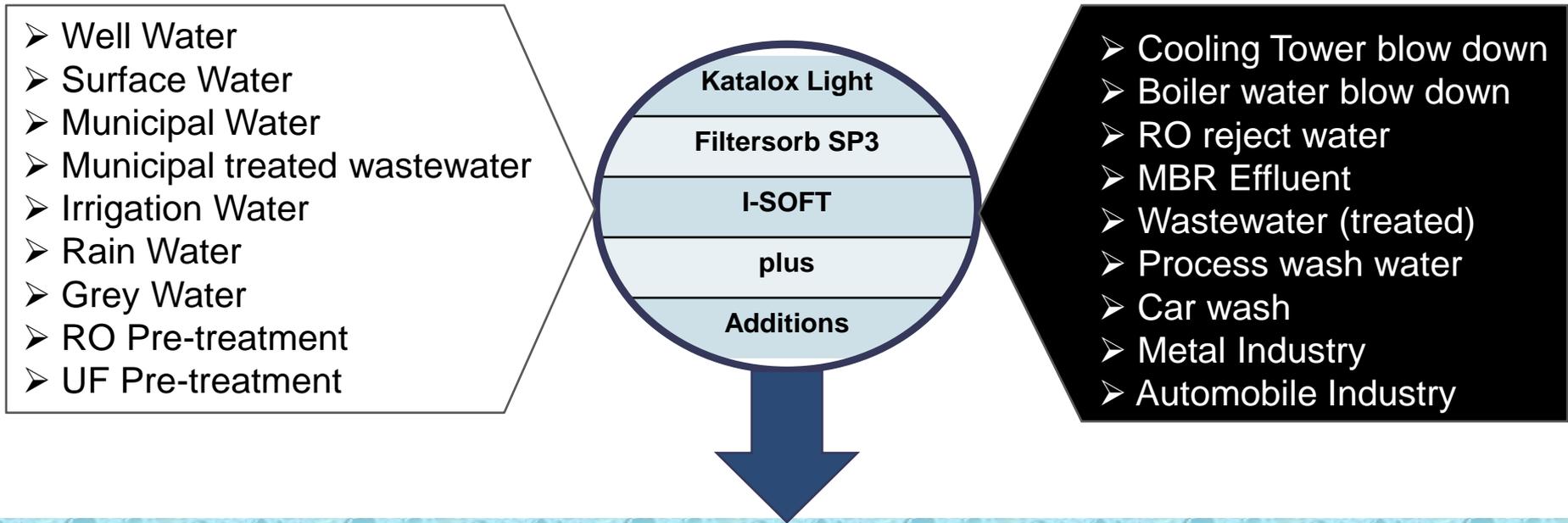
- Perfect barrier for suspended solids, sediments, turbidity
- Perfect removal of Iron, Manganese, Hydrogen sulfide, Lead, Copper, Zinc, organics, color, odor and other Heavy Metals.
- Efficient reduction of **Arsenic** and radio nuclides
- The best Pretreatment for
 - Ultra Filtration
 - Reverse Osmosis
 - Waste Water System

I-SOFT OXYDES / Filtration

- Anion Scale Prevention
- pH Adjustment
- Silica scale prevention
- Calcium Phosphate reduction
- High removal efficiency of bacteria including organics, inorganic
- COD and BOD removal

Conclusion

Watch Solves all possible **Make-up-Water Concerns**
For any Applications, but with **Proper System Design**



Objective of this Presentation is to teach **INSTANT Dosing Products** and to provide all Industries/companies and plants to help them to reduce costs, handling, transport costs and water consumption and create new sources of **Green Water Technology**.

Reduce - Recover and Recycle