

sustainable chemistry  
for the textile industry



ACTICELL  
TECHNOLOGY SOLUTIONS

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Partner

4,000,000,000 jeans are produced every year



**90%**  
are bleached,  
abraded &  
treated with chemicals...

- **Sandblasting used to dominate**

- Caused silicosis



- **Potassium Permanganate (PP) is industrial bleaching chemical**

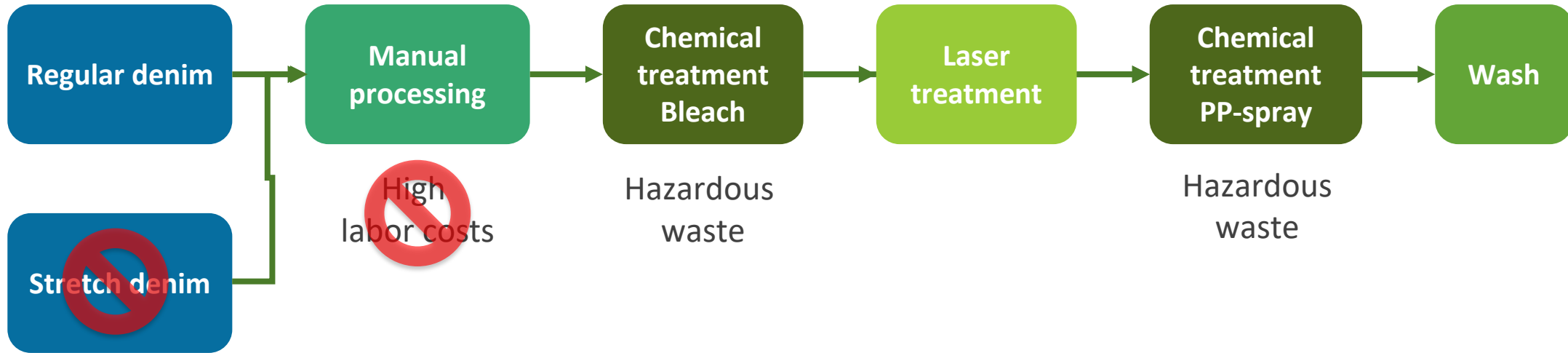
- Very cheap and effective

- **BUT**

- Hazardous to workers
- Hazardous to unborn children (reprotoxic)
- Heavy metals contaminate effluent
- Likely to be banned

Levi's  
shifting to laser

# Laser treatments bring multiple benefits...



... and new challenges

- **We work with the cellulose, not against it**

- Traditional chemistry: Breaks down fibers
- ACTICELL chemistry: Modifies cellulose structure and makes it selectively accessible

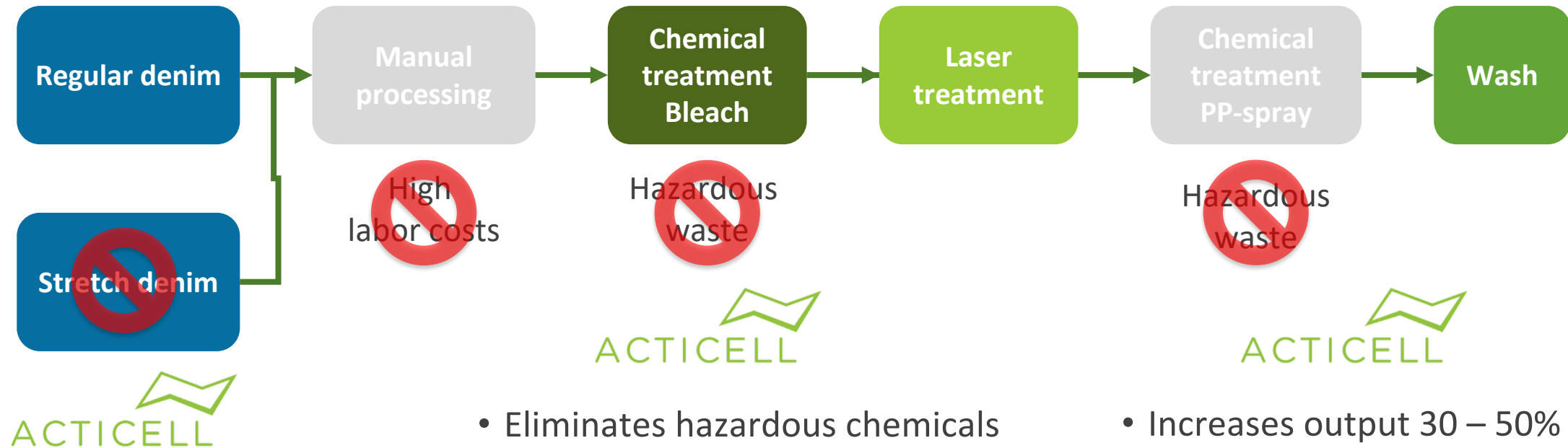
- **Proprietary chemistries boost critical textile technologies**

- Laser Booster™: lowers laser temperature required for abrasion
- Dye Booster™: makes fibers accept more dye
- Ozone Booster™: guides ozone inside the fibers

conventional  
(PP + laser)



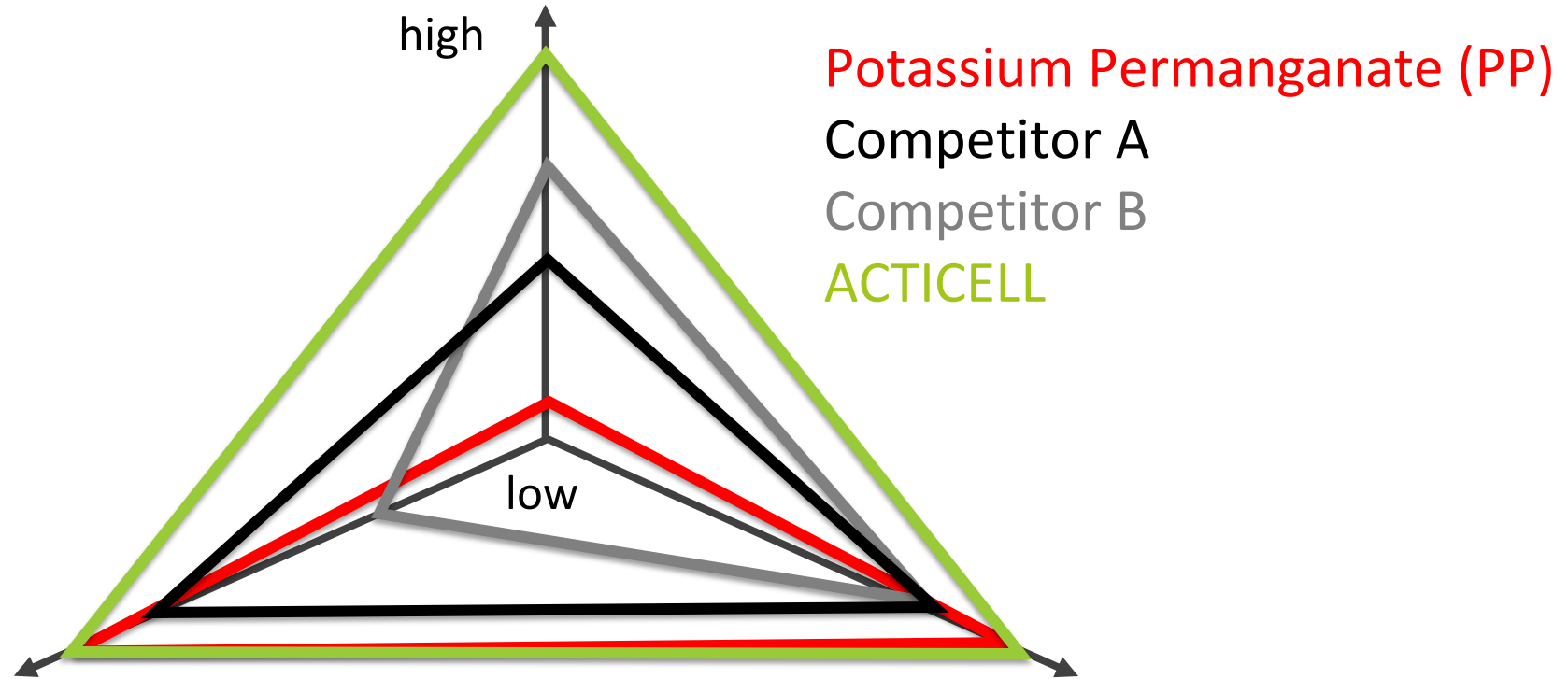
# Laser Booster™ makes lasers safe with stretch



- Eliminates hazardous chemicals
  - Healthier workforce
  - Safer environment
- Reduces costs
- Achieves regulatory compliance

- Increases output 30 – 50%
- Avoids fabric damage
- Enables dynamic bleaching

## SUSTAINABILITY



**COMPETITIVE PRICE**  
drop-in process

**PEFORMANCE**  
match design requirements



- **PP replacement**

- **Laser booster:** PCT application: PCT/EP2016/080371  
Reduces manual processing, increases output, enhances effects
- **Ozone booster:** PCT application: PCT/EP2017/075037  
True waterless process, enhances effects, replaces chlorine
- **Conventional bleach:** PCT application: PCT/EP2016/080370  
Sustainable alternative to PP

- **Easy washable denim**

- **Enzyme booster:** Patent granted: EP 2 000 583 B1/A1  
Enhancing enzyme activity saves process time
- **Dye booster:** US application: US13386013  
Enables superior wash down on sulfur dyed garments

## **DIRECT SALES**

**Selected denim manufacturers & laundries**

## **LICENSING & DISTRIBUTION**

**4 manufacturing & distributor licensees**  
Americas, Asia, Europe & Africa

**Market leader in textile chemicals sells  
ACTICELL laser booster**

€ 18m for 36,000 t per year

**4 billion**

jeans produced per year

**10% market share = 36,000 tons**

Acticell product per year

**€ 18m at EBITDA margin of 66%**

# Technical & commercialization expertise



Hubert Hettegger  
Research & Development

Christian Schimper  
CEO

Paul Pachschoell  
Product Development

Yaroslav Ivashko  
Sales & Distributor Management

Christina Huber  
Quality Management

Juergen Jelly  
Finances, Strategy

# Replace your PP process... next quarter.

