

OPEN SOURCE: WATER INNOVATION

Providing universal access to technology, processes and strategies for water quality and use within the apparel industry

Levi Strauss & Co.

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QUOTES FROM THE MEETING

"In this instance, we are not competitors. We are all in this together to grow AND do the right thing."

"It's our product, our brand no matter where it is."

"Expectations of brands and vendors on water are increasing."

"Initially, working with Levis to explore Water<Less was a decision based on morals rather than business. It just made sense to prioritize and maximize water use efficiency."

"We're not competitive over preventing water pollution."

"Efficiency isn't enough."

"Water enables value capture elsewhere – in savings on labor, energy and other inputs."

"Take the long view on water."

DAY ONE - BEHIND WATER<LESS: A TECHNICAL AND SUSTAINABILITY DEEP DIVE

Goal: Learn and openly share Levi Strauss & Co.'s Water<Less techniques to accelerate innovation

What's Working?

- Through Water<Less techniques, Levi Strauss & Co. has saved more than a billion liters of water and has created a culture that embraces the notion that sustainability is good for business thanks to the realization (through much concerted effort on the part of the Eureka Innovation Lab) that there is no downside to infusing sustainability into the design process.
- Today, 45 vendors use Water<Less techniques – some are dabbling, some are power users
- Water<Less innovations for fabric hold promise: water savings from 30-70%
- Recycling and reuse in laundries can deliver 10x water savings compared with finishing techniques – a game-changer that provides the ability to diversify a facility's water supply

What's Not Working? (Challenges)

- Overcoming inertia – behavior change is really tough even when the data and financials demonstrate value
- Building trust: Convincing designers and suppliers to trust the innovation process and become partners in the effort

- Simplifying complexity for scalability: Pervasiveness of finishes (there are so many) makes it harder to drive uptake
- Supplier learning curve: New Water<Less processes require calibration and the learning curve can be steep; errors in the process can be discouraging to vendors
- On water quality, discharge to POTWs that are run by a city or municipality with no verification or assurance that treatment plant can handle textile wastewater
- Operations and maintenance on-site is lacking due to age of infrastructure and capacity
- Disclosure: sharing publically (Greenpeace, IPE is forcing the hand of brands on this front)

Lessons Learned

- 501 Life Cycle Assessment (LCA) was a wake-up call and reset focus on areas of the value chain that were most water intensive (Cotton – 68%, Mills – 6%, Laundries – 3%, Consumer – 23%)
- The Eureka Innovation Lab is constantly working to balance advancements in process and design with new capital equipment investment; Drivers are aesthetic, technology and cost
- The value is in being able to make a product at a lower cost while streamlining the process and reducing the time needed for production. Argument: Save money in production and make money by increasing competitiveness
- Designers must trust the technical side of the house. LS&Co now only designs new products with Water<Less finishes. To get there, they had to show designers that new processes could deliver the exact same effect and quality in the finish through comparison trials.
- Many of the steps taken in Water<Less finishing should translate into garment dyeing, e.g. cotton and plasma/CO₂
- From lab dreams to scaled reality:

LS&Co. Perspective	Vendor Perspective
<ul style="list-style-type: none"> • Manage expectations for success • Create a locally-relevant business case for vendors • Create a safe space for innovation and cultivated trust by sending global finish staff to vendor facilities to demo Water<Less processes • Take cost cutting off the table – LS&Co. and vendors have agreed to share cost savings in some instances 	<ul style="list-style-type: none"> • Leadership had to commit and management had to make the right investments in Water<Less, including putting the right team and partners in place • Development team was the main driver, but creating the capacity for research was tough; most people are 30+ years in the business – changing is tough. • Given the learning curve, monitoring implementation was very important.

What's Next?

- All new products will be designed with Water<Less finishes, and LS&Co. will continue to innovate on Water<Less fabric, as well as recycling and reuse plus wastewater standards to roll out to fabric mills

- Brands to ramp up engagement of Tier 2 suppliers to build supply chain capacity on water stewardship
- Brand alignment and collective action on training/troubleshooting (using the right indicators to diagnose the problem)

Remaining Questions

Manufacturing (Mills & Laundries):

How might we drive Water<Less innovations for top garment finishes in water-stressed, hot spot regions? How might we drive greater demand for Water<Less in product specifications?

Consumers:

- Have we ever asked the question “why are people washing jeans?” In the US, we wash every two wears. In Europe, it’s every four. In China, it’s every ten. US consumers are on autopilot.
- Can designers influence consumer buying behavior? Ensure that low-impact, Water<Less finishes are all the rage on the catwalk – can designers help create demand for lower impact finishes? Is there a way to ensure that rigid denim is “on trend”?

DAY TWO – SUPPLY CHAIN AND BEYOND: WHAT IS NEEDED FOR GREATER IMPACT?

Goal: Determine how ready brands are for collective action

What’s Working?

Innovation achievements: Circular economy, designing/redesigning for lower water use, input requirements, and going beyond the fence-line to lower watershed impacts

- Company partnerships with Parley for the Ocean: Shoes out of fishnets
- Developments in shoes associated reduction in virgin material use and use of supercritical CO₂ rather than water in the dye process
- Company initiatives to connect supply chain with women empowerment through WASH
- Company collaborations on emerging pollutants: reducing nano and micro particles; use of the Sustainable Apparel Coalition to verify data to identify high water users in the most water-stressed regions
- There are innovations to use processing sludge in Yucatan reforestation projects
- Other companies are investigating raw material solutions to replace cotton, such as nettle and hemp, given anticipated competition between food and fiber crops
- There’s collective action in China to address mill shutdowns, an antimony crisis and limitation on new permits.
- Tools to assist the private sector have evolved and now include the Alliance for Water Stewardship Standard, hot spotting tools like the Water Risk Filter, WWF basin strategies and guidance like CEO Water Mandate’s Public Policy Guidelines
- IFC’s DSS guidelines and PaCT program in Bangladesh driving \$500M of green investment from the Central Bank into the textile sector

- 16 mills participating and delivering 7.8m³ in savings (focus: chemicals, water and energy) through Solidaridad's Better Mills Initiative
- IFC's Working Capital Program driving management conversations on increasing their Term Of Engagement (TOE) score and giving incentives to improve and go beyond compliance

What's Not Working? (Challenges)

- Watching vendors treat incoming water for processing and then dump untreated wastewater at the end of processing
- Low rate/cost of water, e.g. areas of the supply chain where groundwater (which is free except for the electricity used to pump to the surface) is falling 5M/year
- Water, Sanitation and Hygiene (WASH) bombardment: which programs and partners should be supported? The space is quite competitive; identifying the impactful and scalable partners is challenging.
- Apparel has a great track record working together (Zero Discharge of Hazardous Chemicals group, Better Cotton Initiative and Sustainable Apparel Coalition), but addressing manufacturing in key places or even at the industry level won't solve inherent risk. The sector must look to 2030 and the United Nations' Sustainable Development Goals, and pivot to include the public sector and government in innovations and risk response.
- There is a business case for saving water. Some governments are investing heavily in the space, but success will require private sector match financing.
- Identifying Tier 2-3 suppliers (small & medium size vendors) can be difficult for outreach
- Hard to align procurement, sustainability and finance groups of brands on working capital
- The private sector must pivot from "inside the fence-line" water management to a comprehensive "beyond the fence-line" water stewardship approach.
- Most companies see water risk, yet 0% have set public policy targets

Lessons Learned

- Water enables value capture elsewhere, such as savings in labor, energy and inputs. This must be used to create a strong business case for suppliers.
- For supply chain, success requires a dual approach: reduce inside, recycle outside
- Potential for government agencies and regulations to both drive and inhibit innovation
 - Drive: In Storey, Vermont, the vendor is not allowed to discharge water, which has resulted in the utilization of recycling. Currently, 90% of facility water is recycled.
 - Inhibit: in some regions, companies aren't allowed to do their own wastewater treatment and must go to municipal plants where they have less control over the final discharge quality
 - Inhibit: In Brazil, a mill has good ETPS and wants to implement recycling, but they are required by the government to discharge to help dilute pollution
 - Tossup: In China, IPE pressure is driving a crackdown on mills. In one area with five mills, the worst are being shuttered by the government to address pollution concerns.
- On WASH, Overseas Development Institute (ODI) has published a helpful paper on this space, and there may be a way to engage UNICEF to work with the apparel sector to coordinate a WASH program

- WWF learned the power of the private sector to unlock conversations around new water policies and improved allocation schemes in collective action work that took place in Lake Naivasha, Kenya. Also learned you can't parachute it to solve these problems.
- The water problems of today require sectors to be collaborative, smart and strategic. Much can be learned from other sectors. For example, mining is getting hammered and this is driving new thinking around engagement of local communities and changing business as usual.