

# Deconstructing “The Perfect T-Shirt”

*Mike Betts, Director  
better thinking ltd.*

Unit 23  
Links Yard  
Spelman Street  
London E1 5LX  
[www.betterthinking.co.uk](http://www.betterthinking.co.uk)



---

**W**hat does the phrase “the perfect t-shirt” mean to you? A perfectly fitted t-shirt? A shirt that is amazingly high quality? A sustainable t-shirt? Through a public, hands-on study of conscientious and viable garment production, we at better thinking have challenged ourselves to create a t-shirt that is all of these things and more—quite a daunting task, given that none of us had any experience in apparel or textiles before we began.

Better thinking is an ethical branding consultancy that creates dramatic and effective ways for businesses to become more inspirational and successful. We have chosen the humble t-shirt as the vehicle

for our endeavor, based on the logic that almost everybody on the planet owns one and will therefore have a vested interest in the environmental and social impact of its production. Even though we are not about to go into t-shirt-making, our findings from “the perfect t-shirt” project can be applied far beyond the textile industry, giving us a better understanding of the challenges facing any business attempting to green up its act. Moreover, we hope our project will inform the public of the current barriers to sustainable production, as well as increase visibility and support for ventures that are developing successful green solutions.

In our team’s effort to take into account every possible aspect of t-shirt manufacture, we consider how to obtain the raw material (e.g. cultivation practices and resource use), turn it into a t-shirt (shipping, factory power, working conditions and dyes), understand the issues involved in use (laundering, quality and longevity), and discover what happens to it at the end of its life (recycling, composting or landfilling). This is the stripped-down version. Our blog lists 60 different questions identifying the things we’d like to know about our shirt.

We realized early on that tradeoffs would be inevitable. We quickly found ourselves embroiled in earnest debates, such as: Is sending the raw material 5,000 miles away to a ground-breaking green factory worth it? What about using more chemicals to make a t-shirt that uses less water by

staying fresh longer? Or producing a shirt in natural tones rather than bright white, even if this decision may make it less popular and therefore less world-changing?

Ultimately, there are no best answers. The textile industry is still in the first stages of turning itself around, and every environmentally positive decision puts strain on other links in the chain. The good news is that if the infrastructure existed, there could in fact be many different types of “the perfect t-shirt.” They could be made in different locations from different materials by different methods. But for the time being, we have to accept that there are gaps in each chain that necessitate compromise.

Accepting that our t-shirt exists in the real world—and not every material, tool, energy source, transport method and person involved in its production can leave no environmental footprint—we’ve decided to implement a deeply conscious approach, justifying every decision we make. An alternative title for the project could have been, “The World’s Most Considered T-shirt.”

To demonstrate our commitment to finding a truly progressive solution, we invited constructive criticism on our blog by posting everything we’ve learned (except for a few key facts which could make us vulnerable to copycats). Through debating, voting and requesting feedback on the Web site, we sought the public’s active involvement.

This approach to dialogue and interaction helps everyone untangle the issues surrounding the global, \$400 billion garment industry.

Before getting started, we could have confidently described what we thought the final product would look like: affordable, soft, knitted, pure white, 100 percent cotton. In short, it would be identical to a well-made designer shirt, with the only difference being the extra-special feeling of buying a t-shirt made with the utmost environmental and social consideration. Now, 12 months wiser, we have come to realize that, at present, it isn't possible to mass-produce a hardcore ethical t-shirt that looks like a conventional shirt. For example, the existing infrastructure for a natural dye process (which is only more environmentally sound in some respects) can produce runs of 20,000 shirts, maximum. Knowing that companies like Nike, the Gap or H&M consider a run of 100,000 shirts to be on the small side, you can understand why it's not viable for them to pursue such an option. This led us to change an initial description of the project. At the outset called it "a blueprint for an industry." That eventually became something more appropriate: "Inspiration for an industry, progress through transparent communication."

First, we tried to find an appropriate green factory situated close to where the raw material was obtained, thereby avoiding the several tons of emissions created by long-distance transportation.

Ethical manufacturers proved scarce and presented us with some considerable downsides. In one instance, a manufacturer prototyped a hand-woven shirt that was rougher and less pleasant to wear than a conventional, machine-knitted t-shirt. Its aesthetic and its greener, socially-constructive manufacturing process did present advantages, but the scratchiness and lack of elasticity would have made it less popular, reducing the positive impacts of the project as a whole.

When we finally found a factory producing machine-knitted shirts using green energy, the supplier was based on another continent. We decided it was worth the shipping fuel to promote such forward-thinking methods of production. But then we received their samples. Some of the shirts were stitched crookedly; hems were uneven when clearly they shouldn't have been, neck and shoulder seams didn't line up, and joints were bunched up together too tightly. While this wasn't the case with every shirt, it seemed incredibly wasteful to grow the raw material, transport it to the factory, weave it, dye it, and then stitch some of the shirts so badly they couldn't be sold. At the time of writing, we have yet to choose our manufacturer.

Bleaching presented a second major challenge. Typically, t-shirt fibers are bleached in a treatment bath, which is then discharged into wastewater streams, disrupting ecosystems and threatening aquatic life. We discovered that while it is technically

possible to bleach a shirt in a completely environmentally sound way, this requires an innovative closed loop system (i.e., the treatment bath is completely reused). We are struggling to find suppliers who really consider the environment in their manufacturing processes, let alone ones who are so committed they have actually invested in the most advanced technologies available.

Dyeing and transportation were easier to figure out. The conventional dye process discharges massive quantities of toxic chemicals into the environment, including huge amounts of dioxins, the world's number one carcinogen. Of 1,600 dye chemicals available, only 16 are approved by the EPEA as sound for our health and the environment. Our eventual solution to the color problem (an issue for which we have written a detailed report, available on the project Web site) was to avoid color completely. Leaving the shirt undyed eliminates a very toxic part of the production process.

Shipping can represent a significant factor in carbon footprint calculations, yet it is often ignored. We pledged to pursue transportation routes that balance commercial efficiency with environmental concerns, and to encourage renewable technologies wherever possible within the supply chain.

As you can see, assembling our supply chain is a complex, difficult challenge. We hope our trials and successes will indicate what can and should be

expected of the textile industry now, as well as where it can make future improvements. Quite frankly, we found almost all government bodies and NGOs to be less than helpful as sources of information or support. (Not through any unwillingness to help on their part, but purely because much information about sustainability does not exist in ways that are commercially helpful.) This in part explains why the textile industry has done so little up to this point to push the boundaries. Even though we are newcomers in the textile industry, one government source told us we were "at the cutting edge of sustainable textiles." Not good!

Similarly, we've encountered other people within the industry reluctant to share their own knowledge. Understandably, they've spent time and money finding out what they know, and on a few occasions we've had to employ similar tactics to protect our own competitive advantage. However, we share whenever we can, as a purely commercial approach hinders the greater good by making it incredibly difficult for manufacturers to adopt the technological improvements necessary for greener manufacturing.

More openly sharing knowledge might make it easier on the supplier's end, the most static part of the chain. Suppliers have good reason to move slowly. Of everyone in the system, they have the most invested in the current, unsustainable infrastructure. Therefore, they run the greatest risk trying to change it. Switching to cutting-edge green

machinery, re-training staff, and disposing of waste properly requires a significant initial outlay. However, suppliers that prioritize green methods now will be winners in the long run. Green suppliers are so rare that improvements as simple as switching to a renewable power source—often involving no more than a phone call—can result in a significant competitive advantage. This is in addition to the environmental benefit of reducing fossil fuel use.

After viewing the situation from the textile industry's perspective, we have gained some sympathy. Yet we are also somewhat shocked by how little the industry has tried to push the boundaries. While significant barriers to the mass production of ethical t-shirts remain, it is entirely reasonable to demand that all manufacturers commit to some form of continuous improvement. A business could introduce a small percentage of organic fiber, or plan to eliminate all synthetic chemicals used in its factories by the end of a particular year, or launch a range of clothing produced using solar power. The initiatives don't need to be groundbreaking! The commitment behind them just needs to move us all forward—encouraging suppliers to offer larger-scale, greener manufacturing methods, gradually raising industry standards, making customers more aware of ethical issues, and pushing governments to introduce more advanced legislation.

There seems to be a very healthy concern among companies that consumers will disregard their environmental improvements. They fear that consumers, out of cynicism or ignorance, won't take into account the constraints of a complicated supply chain that only allows for gradual reform. As a result, some companies imagine their well-meant efforts backfiring, damaging the brand. In response to this concern, we urge companies to increase transparency. By letting customers know what they are doing and why (as well as what they're not doing and why), and how they intend to improve, businesses can win support for their attempts to introduce ethical improvements.

Realizing that things have to change is a start. If no one knows about the problem, there is no motivation to try to fix it. After that, there's a need for concrete information: the kind that shows people tangible ways they can take action and make choices as businesspeople, as shoppers and as human beings. Ultimately, we need to remember that the support and encouragement of others is just as important as what we do ourselves

