

# BIANCHI

## The Challenge

Bianchi has been known for producing quality bicycles for over 120 years. Since 1997, the company, based in Treviglio (Bergamo, Italy) has been part of the Swedish Cycleurope A.B. Group. They are widely acknowledged as one of the world's leading bicycle manufacturers.

Within Cycleurope, Bianchi is the international brand identified with the top end of the product range. This renowned company produces around 75,000 bikes a year, which represents approximately 10% of the worldwide market. Over the last ten years, Bianchi faced rapid and significant growth from the competition. Ten years ago, a bike frame design could last five years without requiring change; the life cycle of a frame today is two years at most. Time to market has been reduced drastically, and development time schedules are tighter than ever.

Today, Bianchi faces strong competition from American brands. Scott, Specialized and Cannondale utilize innovation and extensive investments in research and development. As a result, Bianchi's R&D focuses on developing the greatest number of designs and prototypes in the shortest time frame. Additional challenges include:

- ▶ Reducing the time-to-market
- ▶ Cutting design times by 50%
- ▶ Developing more designs in less time
- ▶ Optimizing the communications process between all involved departments

## The Solution

Bianchi has been using think3 solutions for several years, embracing the newest technologies. Recently, to meet its competitive challenges, the R&D department adopted thinkiD DesignXpressions™. think3's revolutionary technology enables the team to design innovative and competitive carbon fiber frames.

"For us, thinkiD represents the best solution, especially in surface modeling capabilities," said Fabio Ferri, R&D Product Engineer. "thinkiD represents the ideal combination of design and surface modeling, increasingly important in designing frames. Indeed, since the adoption of carbon fiber, when people talk about frames they refer specifically to frame performance."

Modifying the shape of a frame takes time. But with think3 technology, changes are no longer measured in hours or days—but in minutes. With think3 solutions, the entire revision process can be accelerated. This is made possible by GSM<sup>3</sup> technology (Global Shape Modeling by think3), which automatically performs the geometrical calculations needed to change a shape.

Using thinkiD and think3's award-winning training, support and consultant services has enabled Bianchi to achieve tangible results in a very short time. The design time has been reduced from one year to six months, and the number of prototypes developed has increased significantly. The plan for 2007 is to enhance 18 models out of 20—using the same resources. In the past, when the Bianchi bike line consisted of 20 frame models, no more than five could be remodeled in one year. Using GSM<sup>3</sup>, Bianchi can also create dramatic savings in modification times and development costs.



### Customer Quote

*"With thinkiD DesignXpressions, we have been able to reduce our design time by 50%. We have managed to speed up communication with everyone involved in the production process. The ability to work with imported files from different CAD systems is tremendous. Now we can make design changes more quickly to speed up the revision process. The basis for all these improvements is GSM<sup>3</sup> technology by think3."*  
- Luca Minesso,  
Engineering & Production  
Manager

**Bianchi**

### Key Results

- ▶ Over 30% saved in design time
- ▶ Number of designs increased by 50%
- ▶ Increased product quality by 30%
- ▶ Time to market reduced by 50%

Industry  
Bicycle manufacturing

Location  
Treviglio (Bergamo),  
Italy

"thinkiD strikes the right balance between design and surface modeling," said Luca Minesso, Engineering & Production Manager. "GSM<sup>3</sup> technology by think3 allows us to make changes to a frame in just minutes. This means we can not only make changes more quickly, but it also allows us to speed up the entire revision process."

## The Story

A major difference between the bicycle industry of ten years ago and today is that competition has reached exceedingly high levels. The time to market has been drastically reduced, which means that development time schedules have become tighter than ever.

"A design may take a whole year to be completed, fine-tuned and tested in the wind tunnel," noted Minesso. "To cut our design times by 50% and increase the number of new models, we have also asked the manufacturing department to reduce time frames. In fact, working increasingly with new materials, such as carbon fiber, means that rapid prototyping is not very useful. In order to assess the performance of a structural part such as a frame, the actual mold of the frame must be made. Therefore it has become essential to speed up the communication with mold makers. The adoption of think3 products has also helped to make this communication clearer, more transparent and faster."

According to Minesso, the ability of thinkiD to easily work with imported data from different CAD systems led to the adoption of thinkiD DesignXpressions. "We can collaborate effectively and quickly, and make design changes even when the people we are working with are using different tools from ours. When one of our suppliers uses another software product, thinkiD allows us to check the surfaces, correct them if necessary and send them back before the manufacturing process starts."

## The Payoff

Advantages achieved using think3 technology include:

- ▶ Improved control of surfaces
- ▶ Faster changes to frame shapes
- ▶ Greater flexibility with GSM<sup>3</sup>; more design iterations in real-time
- ▶ Design times reduced by 50%
- ▶ Greater ability to work with imported data from other CAD systems
- ▶ Faster communication between all resources involved in the manufacturing process
- ▶ Improved ease of learning and use with thinkiD's intuitive interface
- ▶ Ongoing think3 support

