



YEAR OF THE SMART BIKE

The race to reinvent the (bicycle) wheel

BY ERIK CROUCH

You're standing in line at a coffee shop, ready to order, when your cell-phone goes off. It's from your bike: 'Someone is stealing me!' Ignoring the eager barista, you burst from the cafe to spot a bike thief in action. He panics, and bails.

Or let's take another scenario. You click your helmet into place, hunch over the handle bars, ratchet up to a high gear and begin pedaling so fast it feels like your knees will hit you in the nose. You fly from Waibaidu Bridge on the North Bund to Yan'an Lu on the South in record time. You pull over, catch your breath and check your phone. Damn! A good speed, but the app says another cyclist has done better.

Those are the type of situations that the people at Basic Conception are hoping will attract business. After 10 months of research, design and development, the Shanghai-based start-up is getting ready to present its technology-equipped 'BiCi' smart bike to the world.

The start-up runs from Shanghai's Knowledge and Innovation Community (KIC), a sizable campus in Yangpu District that is home to some of the city's – and the country's – most promising small technology companies. The basement level of KIC could pass for the offices of Facebook or Google: a sprawling open space filled with 20-some-things on high-end computers, screens overflowing with lines of code or Photoshop de-

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signs and 3D-printers sitting haphazardly on cluttered desks. Within the campus, groups of developers and designers are working on anything from environmental-awareness apps to programs helping Chinese tourists rent cars abroad: but only one start-up has its own fully-stacked bike rack out front.

To the casual passerby, Basic Conception's BiCi is a simple, if high-end, carbon fiber bike. It's clearly a more premium piece of machinery than the standard-issue Flying Pidgeon or Phoenix bikes cluttered for warmth on every Shanghai street corner, but it doesn't look like something out of TRON.

Tucked away in the frame near the back wheel, however, is the piece that makes all the difference: a deck-of-cards sized computer chip that records a user's cycling data, tracks the bike's position via GPS and transmits the information to a rider's smartphone using Bluetooth.

The chip knows all: the biker's speed, favorite routes, heart rate, calories burned and a plethora of other data points that help tailor each bike to its rider's style. It remembers where it has been parked and can notify the owner if it's being stolen – and if the thief gets away with it, the owner can track the bike's GPS. This information is stored in the bike's accompanying BiCi OS app, which can be used by bikers across the country – and perhaps someday, around the world – to compare speeds, share routes and coordinate cycling groups.

"We sold our first batch of 100 bikes within one hour," says Su Chunxiao, operations and marketing manager for Basic Conception. "Our team is only about 20 people, but it hasn't been difficult to attract investors."

KIC is a potential gold mine for innovators with plenty of energy and a good idea. Basic Conception was accepted into the KIC program last March with a team of just five people, and they were given a free work space and technical support from the Knowledge and Innovation Community, as well as business mentoring and industry connections.



After six months, with an expanded team and a ready prototype, they opened to investors.

In no time, the BiCi had raised USD1 million in funding. They have already sold a batch of prototype bikes at RMB4,000 each to early investors, and aim for a consumer release this year. In the meantime, they've taken to the web, and are crowdsourcing the bike's production on Pozible, a website similar to Kickstarter but aimed at the Australian and East-Asian markets. As they get things ready for the BiCi's public debut, however, there is competition on the horizon.

In the depths of the Baidu campus in Beijing, researchers in a small R&D room hidden away near the staff parking lot have been hard at work developing a prototype that will give the BiCi a run (well, ride) for its money.

Developed by Baidu with input from the Tsinghua Academy of Arts and Design, Baidu's DuBike sports many of the features seen in the BiCi's design: integrated GPS, carbon fiber frame, calorie counter and even a similar social networking app.

The DuBike also has its fair share of unique tricks: the GPS integrates with Baidu Maps, and can give riders turn-by-turn bik-

ing directions via left/right lights on the handlebars and a computer generated voice that speaks to the rider – directions that can be used for exploring new routes or avoiding traffic on the fly. It also sports a small digital screen that displays basic stats like the bike's speed, wheel RPM and the rider's heart rate. And for Baidu, this prototype is only the beginning.

"This is not about selling bicycles," says Kaiser Kuo, Baidu's international communications director. "This is about an integrated operating system. We want to make it so that anyone, any bike manufacturer, can use these same specs, the same OS, to make any bike 'smart.' It would not be an expensive upgrade to a normal bicycle."

Unlike Basic Conception, Baidu doesn't seek to produce bikes on a large scale. The company is producing an initial line-up of bikes, but ultimately plans to make hardware that could be used to upgrade existing bike designs, giving them the features found in the DuBike prototype. For Kuo, it's an idea whose time has come.

"Since we put out the concept, it has not only attracted media attention but also a lot of

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attention from the investor community, from cycling enthusiasts," he says. "It's one of those things that is a no-brainer. It's astonishing to me that no-one had done this already. It's so logical to have something like this, especially in a country like China where transportation is so dependent on bicycles."

Both Baidu and Basic Conception aim to have their products on the market this year. The BiCi has developed a loyal following among interested investors and tech-curious bikers, but the behemoth that is Baidu – with its massive maps database, social media savvy and ability to negotiate on level with the country's biggest bicycle manufacturers – is certainly at an advantage when aiming for mass appeal.

It's hard to disagree with Kuo: smart bikes do seem like a no-brainer, especially in China, where the one thing that people use more than their bicycles are their apps. If 2014 was the year of the taxi app, it looks as though this might be the year of the smart bike.

Additional research by Zoey Zha, Tongfei Zhang and Oscar Holland

// To learn more about the BiCi, check out bi-ci.com, or visit their crowdfunding site at www.pozible.com/project/188953. To learn more about the DuBike, visit dubike.baidu.com

