The timeline of bicycle construction materials is a short read. It started with steel, had a brief tango with titanium and aluminum before being completely dominated by carbon. Within that arc, aluminum got a bad rap at some point. It was strong, light, and infinitely more malleable than steel. Yet the downfall was that because of its stiffness, ride quality suffered. The inherent suppleness of steel that was able to absorb road chatter was lost with aluminum. Once carbon was introduced, aluminum took a near permanent back seat. Until now.

At Specialized we think the possibilities of aluminum are only just being discovered. We’re out to make an aluminum bike that’s not just light and stiff but comfortable to ride too. It’s time to redefine what aluminum is capable of.
In order to completely transform the way we approach aluminum bikes we put together a team of some of the best minds in alloy bicycle design and engineering. Chuck Teixeira and Chris D’Aluisio are joined by Luc Callahan, Andrew Frasca and Kyle Chubbuck making up the brain trust that is pushing Specialized aluminum into the future.

Together, we have the best minds in bicycle engineering and design not just raising the bar of what aluminum is capable of, they’re exploding it.

“I WASN’T SATISFIED WITH WHERE ALUMINUM WAS AT. I THINK IT’S CAPABLE OF SO MUCH MORE. I’M BACK IN THE GAME TO BRING ALUMINUM UP TO THE NEXT LEVEL.”

CHUCK TEIXEIRA
Spending a lifetime in the cycling industry can teach you a thing or two about progress. It can also create complacency resulting in products that don’t look or perform all that differently from year to year. What makes Chuck’s contributions to cycling so impressive is the consistency of his innovation and progression. Having a history firmly rooted in all things cycling, Chuck was able to marry that passion with his love of engineering and the cycling world has been thankful for it ever since. Chuck’s input into D’Aluisio Smartweld is unique in that he was at the forefront of the aluminum revolution when it first started. The tube-sets he was responsible for engineering at Easton set the standard for an industry; it’s only fitting that, yet again, Chuck is pushing the limits and redefining what’s possible with aluminum. Oh and he’s pretty damn quick on a bike too.

Chris D’Aluisio - is responsible for some of the most innovative products to roll off the Specialized floor in the past decade. The Venge, Shiv, CG-R seatpost, and Tarmac are just a few of the palmarés in his engineering quiver. It follows that when we decided to take aluminum to the next level, Chris was tasked with leading the charge. Attaching your name to a piece of technology isn’t something to be taken lightly, but then, D’Aluisio Smartweld isn’t your average piece of technology. Chris realized that the key to redefining the way aluminum performs was to redefine the way the welds were executed. Culling experience from his motorsport background, the D’Aluisio Smartweld technology was born and with it, a revolution in the way aluminum will be thought of.

“Not since Chuck introduced Taperwall aluminum tube sets to the cycling industry has alloy experienced such a marked step forward. D’Aluisio Smartweld” is a truly revolutionary process that is allowing us to unlock the full potential of the modern aluminum performance bicycle.”

Chris D’Aluisio
INTRODUCING D’ALUISIO SMARTWELD™ TECHNOLOGY - a patented and revolutionary new approach to aluminum bike design and hand built construction. In order to reimagine what aluminum is capable of, Chris D’Aluisio reimagined how aluminum bikes were being made. Traditionally, aluminum tubes were cut and welded together at the joints using welding methods that relied heavily on the skill of the craftsman. What D’Alusio Smartweld Technology does is take those joints and connection points and hands them back to the engineers. The headtube, toptube, and downtube have been hydroformed with a curved, dome-like edge that, when butted together, creates a seamless valley that is filled with weld material. What does all this mean? A connection point that is stiffer, more durable, and more consistent than anything else on the market. It’s a performance leap in aluminum that, until this point, has never been seen before and it’s based on a concept that’s been hiding in plain sight. Cylinders have long been strengthened by rolling the edges - just look at oil drums and aluminum cans for example.

D’Aluisio Smartweld™ Technology doesn’t just stop at increased stiffness. Because the connection points have been moved away from the area of greatest stress, tube shapes and makeups can now be drastically changed. The weld contact points are so strong that less material is needed in other areas allowing for levels of compliance to be engineered into the frame that have never been possible with aluminum. Thinner tube walls at key locations allow aluminum to react in a way it hasn’t before, providing a ride quality that is unmatched in its class. You haven’t ridden aluminum until you’ve ridden Specialized D’Aluisio Smartweld™ aluminum.

D’ALUISIO SMARTWELD™
US PATENT 8,042,822

FOR MORE INFO: WWW.SPECIALIZED.COM/SMARTWELD
The new Specialized S-Works Allez, Allez Expert, Allez Race, and Allez Comp are the culmination of all these innovations in one beautiful package. Simply put, they’re the lightest and most compliant aluminum bikes we’ve ever made. It’s now possible to find carbon-like performance at the price of aluminum. All the stiffness and responsiveness you’d expect, with the type of ride quality you’ve never experienced with aluminum. Combined with the carbon fork – the same fork used in our Tarmac – the 2014 Allez frames are the perfect performance driven machines that won’t leave you grimacing at the cash register. The performance gains in testing are like nothing we’ve ever seen before from aluminum. Confident descending, supple ride feel, and the kind of snappiness that makes you want to sprint out of the saddle between every stop light - the Specialized Allez with D’Aluisio Smartweld™ Technology is the definition of uncompromising design.

“WHEN DESIGNING A BIKE WE’RE ALWAYS LOOKING TO NAIL THREE BASIC RIDING ELEMENTS. IT SHOULD ABSORB ROAD SHOCK, BE LIGHT, AND HANDLE CONFIDENTLY. WITH D’ALUISIO SMARTWELD™ WE’RE NOW ABLE TO ENGINEER NEW LEVELS OF VERTICAL COMPLIANCE TO HELP ABSORB ROAD SHOCK, AND MORE EFFECTIVE LATERAL (TORSIONAL) STIFFNESS FOR IMPROVED HANDLING.”

CHRIS D’ALUISIO

THE NEW FACE OF HANDMADE
“THE RIDING FEEL IS SUPER CRISP, AND ITS POWERFUL ACCELERATION WAS VERY IMPRESSIVE THANKS TO ITS SMARTWELD FRAME BUILDING METHOD.”
WWW.CYCLOWIRED.JP (JAPAN)

“The S-Works Allez was easily the finest-riding aluminum frame I’ve encountered. I’ll go as far as to say that I preferred the ride of the S-Works Allez to some carbon frames I’ve been on”
WWW.REDKITEPRAYER.COM (USA)

“THE ALLEZ WAS SMOOTH EVEN WHEN I TOOK IT UP A GRAVEL ROAD MORE SUITED TO ITS SIBLINGS THE ROUBAIX OR CRUX.”
CANADIAN CYCLIST MAGAZINE, (CANADA)

“This bike behaves very well in accelerations and on climbs, we tried it during a hot day at Lake Como; after some hard climbs we really enjoyed going downhill. It’s very good at high speed cornering, which means the D’Aluisio Smartweld” head tube does its job perfectly.”
WWW.CYCLINSIDE.COM (ITALY)
It’s time for aluminum to make a return. No longer is it a material mired by compromise. By redefining the way aluminum is constructed we’ve been able to redefine its characteristics. Performance can now be achieved at a price that won’t break the bank and a ride quality that won’t break your body. With Specialized D’Aluisio Smartweld™ Technology aluminum’s future is brighter than ever.

“We’ve got a sneaky feeling that Specialized might be about to take back their alloy crown.”

WWW.BIKERADAR.COM (UK)
KEY FEATURES

- Race-inspired, smooth-welded, fully-manipulated E5 Premium S-Works Aluminum frame with D’Aluisio Smartweld™ Technology and tapered headtube is light and fast
- S-Works Tarmac full monocoque FACT carbon fork with tapered steerer is super light with great torsional rigidity for high-speed handling
- S-Works Tarmac oversized carbon bar is extremely stiff and light for serious performance
- Turbo 24c tires

- Shimano Dura-Ace brakes provide superior stopping power and confidence at top speed
- Be ready for any attack with lightning quick shifting from Shimano Dura-Ace shift levers
- Rapide CLX 40 wheels are incredibly light and stiff while providing an aero advantage
- Minimalist, high-performance Body Geometry Toupe Pro saddle with carbon rails, flat profile, and generous padding for long rides and explosive efforts

ALLEZ EXPERT

KEY FEATURES

- Race-inspired, smooth-welded, fully-manipulated E5 Premium SL Aluminum frame with D’Aluisio Smartweld™ Technology and tapered headtube is light and fast
- Tarmac Comp full monocoque FACT carbon fork with tapered steerer is super light with great torsional rigidity for high-speed handling
- Shimano Ultegra shifters are at the ready for all your shifting needs and are super lightweight

- Fulcrum Racing S Five wheels blend super lightweight performance with high durability to keep you rolling fast
- Minimalist, high-performance Body Geometry Toupe Comp Gel saddle with Cr-Mo rails, flat profile, and generous padding for long rides and explosive efforts
- Shimano Ultegra brakes
- Turbo 24c tires

S-WORKS ALLEZ
ALLEZ RACE

• Race-inspired, smooth-welded, fully-manipulated E5 Premium Aluminum frame with D’Aluisio Smartweld™ Technology and tapered headtube is light and fast
• Tarmac Comp full monocoque FACT carbon fork with tapered steerer is super light with great torsional rigidity for high-speed handling
• Shimano 105 STI shift levers provide crisp shifting to ensure you’re always in the right gear

KEY FEATURES

• AXIS 2.0 wheels provide semi-aero performance with lightweight rims and strength to keep you rolling fast with Specialized Espoir tires
• Minimalist, high-performance Body Geometry Toupe Comp Gel saddle with Cr-Mo rails, flat profile, and generous padding for long rides and explosive efforts

ALLEZ COMP SMARTWELD

• Race-inspired, smooth-welded, fully-manipulated E5 Premium Aluminum frame with D’Aluisio Smartweld™ Technology and tapered headtube is light and fast
• Tarmac Comp full monocoque FACT carbon fork with tapered steerer is super light with great torsional rigidity for high-speed handling
• Shimano Tiagra shifters with STI technology for quick, crisp shifting whenever you need

KEY FEATURES

• FSA Gossamer BB30 alloy crankset with mid-compact gearing is stiff and light for efficiency over any terrain
• AXIS 1.0 wheelset is significantly lighter than comparable-level wheelsets; these tough wheels roll smooth and fast
• Supportive Body Geometry Riva Road Gel saddle is the perfect combination of comfort and efficiency