
SAP S/4HANA using the Global Bike Case Study

SAP S/4HANA Case Study (SAP SE/SAP UCC)

Global Bike Inc. has a practical design philosophy from its deep roots in off-road trail racing and long-distance road racing sports. It was founded by John Davis and Peter Schwarz, who designed the first bikes out of the necessity to win their races as available bikes could not perform to their extremely high standards.

Since then, Global Bike Incorporated has continued to deliver innovative high-performance bicycles to the world's most demanding competitors – whether the competition is on pavement or dirt, for money, fame, or just bragging rights.

John Davis has won numerous downhill and cross-country championships in the mountain racing circuit in America. He realized that the mass-produced bikes available then were not enough for the type of racing he was doing. So, he decided to strip four (4) of his old bikes down and rebuild them into a single “*Frankenstein*” bike that would eventually lead him to win the national championship. The term “*Frankenstein*” refers to a novel of the same title, which had Victor Frankenstein, a scientist who created new life out of old body parts and chemicals.

As the news about his Frankenstein bikes spread, the interest in having one rises. In 1990, he started producing the first series of Frankenstein bikes in his garage while recovering from an injury. As more orders came in, John successfully expanded **Frankenstein Bikes** from his garage into a full-blown manufacturing facility in Dallas, Texas, in the United States. He began producing custom trail bikes sold through a network of bike dealers nationwide.

At nearly the same time, **Peter Schwarz** from Heidelberg, Germany, studied engineering and competed in regional races on weekends. He also worked at a bike shop in Heidelberg by fixing student bikes and tuning the touring bikes he and his friends rode for competitions. As with the reputation of a fierce competitor and a mechanical wizard, Peter began to design and build road bikes based on an ultra-light composite frame for one of his engineering courses. Using carbon composite materials allowed him to build a significantly stronger frame and one-tenth of the weight of the competing frames.

As a student, Peter did not have financial resources, so he partnered with a local company that manufactured his frame designs as a contract manufacturer. Soon enough, in 1993, his frames were being used by European races. He started **Heidelberg Composites** to market and design frames that a contract manufacturer fabricated on a larger scale. His company eventually became the leader in lightweight touring frames in Europe.

In 2000, John and Peter met and recognized their mutual passion for performance and complimentary business models. Both have been looking for a partner in another racing field and a partner in a different market. They realized that a merger between their companies would be extremely synergistic and that combining their product lines and regional distribution channels would generate huge efficiencies.

It led to the merger of Heidelberg Composites and Frankenstein Bikes in 2001 to form the **Global Bike Inc.** John and Peter share as CEOs, responsible for managing the company's global organization. John is responsible for sales, marketing, service and support, IT, finance, and human resources groups. At the same time, Peter is responsible for research, design, procurement, and manufacturing groups from an organizational reporting perspective.

As Global Bike is a process-centric organization, the two prefer to think of the processes they are responsible for rather than the company's functional areas that report to them. Given this, Peter is responsible for **Idea-to-Market** and **Build-to-Stock**, and John is responsible for **Order-to-Cash** and **Service & Support**, as well as the supporting services for all four (4) key processes.

Global Bike Strategies (SAP SE/SAP UCC)

Product Strategy

Product development is the most critical element of Global Bike's past and future growth due to the demand for the highest quality, toughness, and performance from their bikes and accessories. They have invested in this area, focusing on innovation, quality, safety, and speed to market.

One of the company's product strategies is having an extensive innovation network to source ideas from riders, dealers, and professionals to improve its bicycles' performance, reliability, and quality.

Global Bike's signature composite frames are known for their strength, low weight, and easy maintenance. Global Bike produces two (2) models of their signature road bikes, a **deluxe** and a **professional** model. They differ in the type of wheels used: **aluminum** for the deluxe and **carbon composite** for the professional model.

Global Bike's off-road are also recognized as incredibly tough and easy to maintain. Global Bike trail bikes are the preferred choice of world-champion off-road racers. Global Bike produces two (2) types of off-road bikes, a **men's** and **women's** model. The models differ as the women's frame is smaller in size and changes in its ergonomic shaping compared to the men's model.

Global Bike also has an accessories product line consisting of helmets, t-shirts, and other accessories. They partner with only the highest quality accessories suppliers, which will help enhance riders' performance and comfort while riding their bikes.

Global Bike products (finished goods) and accessories (training goods) in a SAP S/4HANA environment, respectively.

DELUXE TOURING BIKE (BLACK)	EN	DXTR1000
DELUXE TOURING BIKE (RED)	EN	DXTR3000
DELUXE TOURING BIKE (SILVER)	EN	DXTR2000
MEN'S OFF ROAD BIKE	EN	ORMN1000
PROFESSIONAL TOURING BIKE (BLACK)	EN	PRTR1000
PROFESSIONAL TOURING BIKE (RED)	EN	PRTR3000
PROFESSIONAL TOURING BIKE (SILVER)	EN	PRTR2000
WOMEN'S OFF ROAD BIKE	EN	ORWN1000

Figure 1. Finished goods. Retrieved from Partner. SAP UCC Magdeburg.

AIR PUMP	EN	PUMP1000
ELBOW PADS	EN	EPAD1000
FIRST AID KIT	EN	FAID1000
KNEE PADS	EN	KPAD1000
OFF ROAD HELMET	EN	OHMT1000
REPAIR KIT	EN	RKIT1000
ROAD HELMET	EN	RHMT1000
T-SHIRT	EN	SHRT1000
WATER BOTTLE	EN	BOTL1000
WATER BOTTLE CAGE	EN	CAGE1000

Figure 2. Training goods. Retrieved from Partner. SAP UCC Magdeburg.

Manufacturing Strategy

Global Bike operates two (2) production facilities, Dallas and Heidelberg, which have three (3) assembly lines that can produce around a thousand bikes annually. The total production capacity is about 6,000 bikes per year, but it can be increased by 15%-20% using overtime hours and part-time workers.

Global Bike outsources the production of off-road and touring frames and carbon composite wheels to trusted partners with specialty facilities to create the complex materials used. They maintain collaborative research and design relationships with these facilities to ensure that innovations in both material and structural capabilities are included in the frames. Global Bike mainly assembles **semi-finished goods** into **finished goods** at its production facilities, which are either stored in the local warehouse or shipped to other regional distribution centers to fulfill customer orders.

Global Bike's raw materials and semi-finished products are in a SAP S/4HANA environment, respectively.

BRAKE KIT	EN	BRKT1000
CARBON COMPOSITE WHEEL	EN	CCWH1000
CHAIN	EN	CHAN1000
CIRCULATION FAN FILTER	EN	FLTR1000
DERAILLEUR GEAR ASSEMBLY	EN	DGAM1000
HEX NUT 5 MM	EN	HXNT1000
LOCK WASHER 5 MM	EN	LWSH1000
MEN'S OFF ROAD FRAME	EN	OFFR1000
OFF ROAD ALUMINUM WHEEL	EN	ORWH1000
OFF ROAD HANDLE BAR	EN	ORHB1000
OFF ROAD SEAT KIT	EN	ORSK1000
OFF ROAD TIRE	EN	ORTR1000
OFF ROAD TUBE	EN	ORTB1000
PACKAGING	EN	PCKG1000
PEDAL ASSEMBLY	EN	PEDL1000
SOCKET HEAD BOLT 5X20MM	EN	BOLT1000
TOURING ALUMINUM WHEEL	EN	TRWH1000
TOURING FRAME-BLACK	EN	TRFR1000
TOURING FRAME-RED	EN	TRFR3000
TOURING FRAME-SILVER	EN	TRFR2000
TOURING HANDLE BAR	EN	TRHB1000
TOURING SEAT KIT	EN	TRSK1000
TOURING TIRE	EN	TRTR1000
TOURING TUBE	EN	TRTB1000
WARRANTY DOCUMENT	EN	WDOC1000
WOMEN'S OFF ROAD FRAME	EN	OFFR2000

Figure 3. Raw materials. Retrieved from Partner. SAP UCC Magdeburg.

CARBON COMPOSITE WHEEL ASSEMBLY	EN	CCWA1000
OFF ROAD ALUMINUM WHEEL ASSEMBLY	EN	ORWA1000
TOURING ALUMINUM WHEEL ASSEMBLY	EN	TRWA1000

Figure 4. Semi-finished goods. Retrieved from Partner. SAP UCC Magdeburg

Distribution and Partner Network

Given the highly specialized nature of Global Bike's bicycles and the personalized needs of riders, Global Bike sells its bikes exclusively through reputable and respected **Independent Bicycle Dealers (IBDs)**. These dealers have staff members with expertise in off-road and tour racing to help consumers pick the right Global Bike bike and accessories for their individual needs.

Given the highly technical nature of the products, Global Bike embraced the Internet as an information channel to maximize its potential for educating consumers and partners and marketing its products to a large audience.

Since Global Bike's main sales channel is through specialty resellers, given the complex tax issues associated with selling in multiple states and countries, they have limited Internet sales.

The following shows Global Bike’s distribution network, detailing the countries, models, and bike prices.

02210	BOSTON	BEANTOWN BIKES	5000	US00	04277	LEIPZIG	DRAHTESEL	18000	DE00
10014	NEW YORK CITY	BIG APPLE BIKES	2000	US00	10999	BERLIN	CAPITAL BIKES	16000	DE00
19073	PHILADELPHIA	PHILLY BIKES	3000	US00	17389	ANKLAM	OSTSEERAD	21000	DE00
20003	WASHINGTON DC	DC BIKES	11000	US00	20249	HAMBURG	ALSTER CYCLING	14000	DE00
30319	ATLANTA	PEACHTREE BIKES	4000	US00	22767	HAMBURG	RED LIGHT BIKES	23000	DE00
48076	DETROIT	MOTOWN BIKES	8000	US00	30629	HANNOVER	CRUISER BIKES	17000	DE00
49504	GRAND RAPIDS	FURNITURE CITY BIKES	7000	US00	39126	MAGDEBURG	VELODOM	24000	DE00
60515	CHICAGO	WINDY CITY BIKES	6000	US00	44784	BOCHUM	FAHRPOTT	19000	DE00
80207	DENVER	ROCKY MOUNTAIN BIKES	1000	US00	63263	NEU-ISENBURG	AIRPORT BIKES	13000	DE00
92612	IRVINE	SOCAL BIKES	9000	US00	69120	HEIDELBERG	NECKARAD	20000	DE00
94304	PALO ALTO	SILICON VALLEY BIKES	10000	US00	70499	STUTT GART	RADLELAND	22000	DE00
98146	SEATTLE	NORTHWEST BIKES	12000	US00	81829	MÜNCHEN	BAVARIA BIKES	15000	DE00

Figure 5. Distribution network. Retrieved from Partner. SAP UCC Magdeburg.

Global Bike establishes an extensive **partner operation** to ensure process continuity between its partners to provide best-in-class products. Special attention has been paid to nurturing and protecting strong relationships with suppliers. Global Bike is also generally the largest customer of its main suppliers.

The following shows the detailed materials that Global Bike acquired from its various partners.

ATLANTA	000	OLYMPIC PROTECTIVE GEAR	101000	US00	AUGSBURG	000	LOHSE SCHRAUBE	118000	DE00
CARLSBAD	000	REDWOOD KITS	112000	US00	BIELEFELD	000	PYRAMID BIKING	114000	DE00
CINCINNATI	000	BOOMTOWN TIRE & WHEEL	102000	US00	BRAUNSCHWEIG	000	BURGMEISTER ZUBEHÖR OHG	113000	DE00
EDISON	000	LIGHTBULB ACCESSORY KITS	104000	US00	DRESDEN	000	SACHSEN STAHL AG	123000	DE00
GRAND RAPIDS	000	RAPIDS NUTS N BOLTS	108000	US00	ERFURT	000	ABS BRAKES GMBH	115000	DE00
HOUSTON	000	SPACE BIKE COMPOSITES	105000	US00	HEILBRONN	000	THICK SPOKE	119000	DE00
IRVING	000	DALLAS BIKE BASICS	103000	US00	KARLSRUHE	000	GUMMI SCHULTZE	117000	DE00
LACROSSE	000	NIGHT RIDER ALUMINUM PROD	106000	US00	KÖLN	000	COLOGNE BIKE SUPPLIES	122000	DE00
MCLEAN	000	SPY GEAR	107000	US00	MANNHEIM	000	FLAT TIRE AND MORE	116000	DE00
MIAMI	000	FUN N THE SUN SEATS N BAR	110000	US00	MÜNCHEN	000	RUN & FUN	124000	DE00
PORTLAND	000	GREEN BLAZERS SEATS	109000	US00	SANDKRUG	000	SHELL GEAR	121000	DE00
SCOTTSDALE	000	SUNNY SIDE UP TIRE	111000	US00	WÜRZBURG	000	MAIN CARBON	120000	DE00

Figure 6. Partner network. Retrieved from Partner. SAP UCC Magdeburg.

IT Strategy

In 2009, Global Bike used a shared services model for all IT functions in the Dallas office. Before this, divisions were running multiple and independent application environments. With the move to centralized IT, Global Bike also implemented **SAP ERP (version 6.0)**.

All ERP functions are centralized to reduce costs and deliver global best-in-class technology to all divisions. This centralized approach gives Global Bike an advanced business platform under a highly controlled environment, enabling consistency of operations and process integrity across the globe.

In 2017, the company’s management moved to **SAP S/4HANA** to accelerate the digital transformation.

References:

- Epistemy Press (2023). *Global Bike Inc Overview*. [Web Article]. Retrieved on January 4, 2024, from <https://epistemypress.com/gbi-overview/>
 Partner (2022 SAP SE/SAP UCC Magdeburg for Academic Competency Centre)