

# Q Africa.

## Artisans in the Auto Industry.

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BMW ZA  
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## Scope.

1. A comparison: The traditional vs. modern Artisan.
2. BMW SA Artisan technology timeline.
3. Challenges BMW SA are currently facing.
4. The Artisan of tomorrow.
5. BMW's endeavour to bridge the gap.
6. The need for Artisans in the motor industry.

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## Artisans in the Auto Industry

**The Artisan is he who merely applies the rules which others have detected.**

Henry David Thoreau



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## Traditional vs. modern Artisans

### In the past...

Sound technical know how and general ability to fix things...



### Now...

Technical understanding and ability to diagnose, repair and prevent...



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## Traditional vs. modern Artisans

### In the past...

Simple processes and uncomplicated products...



### Now...

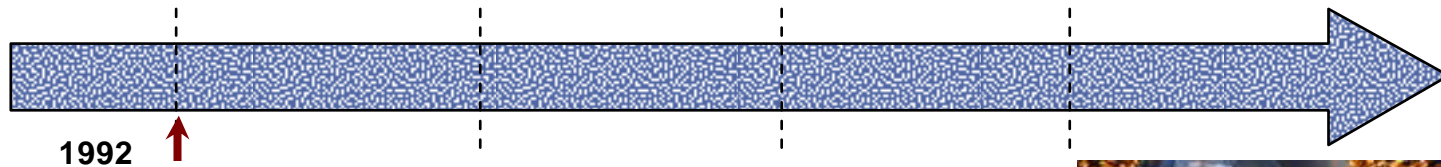
Complex automates processes and even more complex products...



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## BMW Artisan technology timeline.

### Timeline.



#### Equipment used.

- 6 Robots.
- Direct drives.
- H1 Bus, PTP.
- Mechanical Hangers.
- Manual welding guns.

#### Artisan skills required.

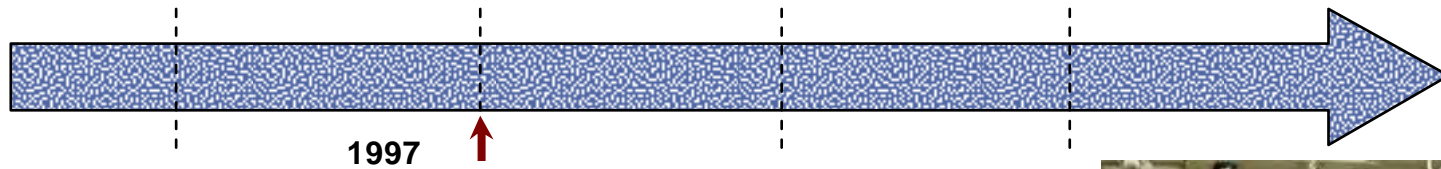
- Advanced mechanical.
- Advanced electrical.
- Advanced hydraulics.
- Advanced pneumatics.
- Advanced welding.
- Advanced wiring.
- Problem solving.



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## BMW Artisan technology timeline.

### Timeline.



#### Equipment used.

- 48 Robots.
- 12 PLCs.
- Automated drives.
- Interbus copper networks.
- Auto and manual welding.

#### Artisan skills required.

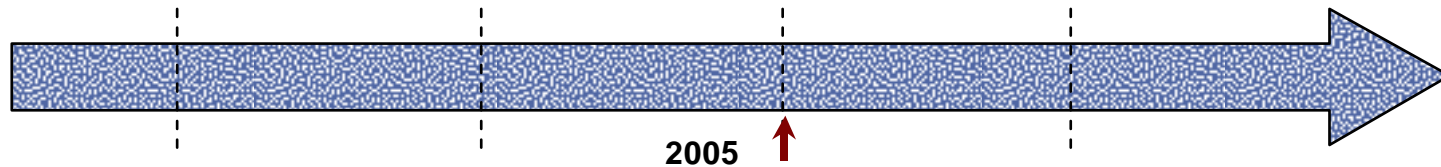
- Programming.
- PC Literacy.
- Intermediate mechanical.
- Intermediate electrical and electronic.
- Intermediate hydraulics.
- Intermediate pneumatics.
- Intermediate welding.
- Advanced Wiring.
- Problem solving.



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# BMW Artisan technology timeline.

### Timeline.



#### Equipment used.

- 106 Robots.
- 53 PLCs.
- Integrated drives.
- Safety scanners and comms.
- Robot 48 / 12/14
- 106 / 53 H1 Bus, PTP
- 200 Interbus, Copper

#### Artisan skills required.

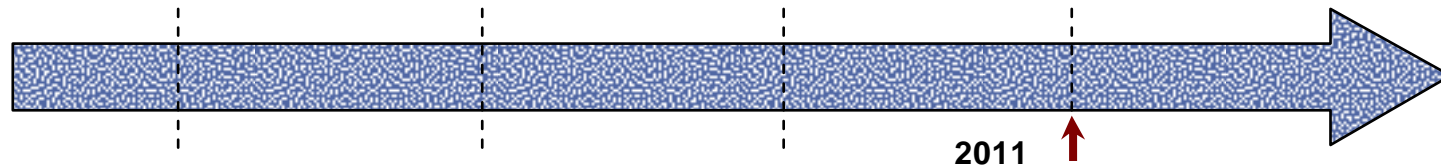
- Intermediate programming.
- Intermediate PC Literacy.
- Intermediate networks.
- Intermediate welding.
- Intermediate hydraulics.
- Intermediate pneumatics.
- Intermediate electronics.
- Intermediate electrical.
- Mechanical.



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## BMW Artisan technology timeline.

### Timeline.

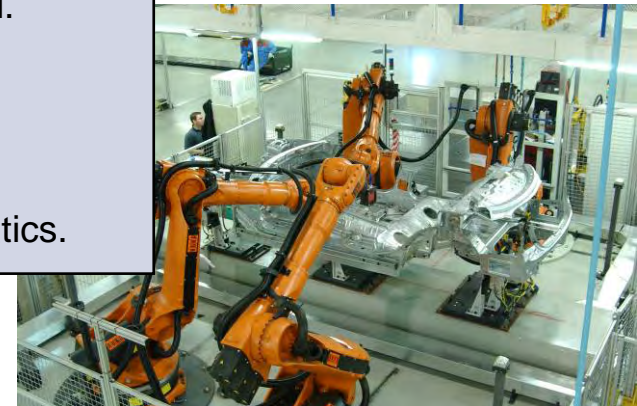


#### Equipment to be used.

- 200 Robots.
- 80 PLCs.
- Profinet / SAFE
- Smart Drives and motors.
- Auto hangers.
- Auto Welding Guns
- Fibre optics.
- Integrated system safety

#### Artisan skills required.

- Advanced programming.
- Advanced PC Literacy.
- Advanced electronic communications and networks.
- Electronic and electrical.
- Mechanical.
- Research.
- Versatile problem solving.
- Hydraulics and pneumatics.



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## BMW Artisan technology timeline.

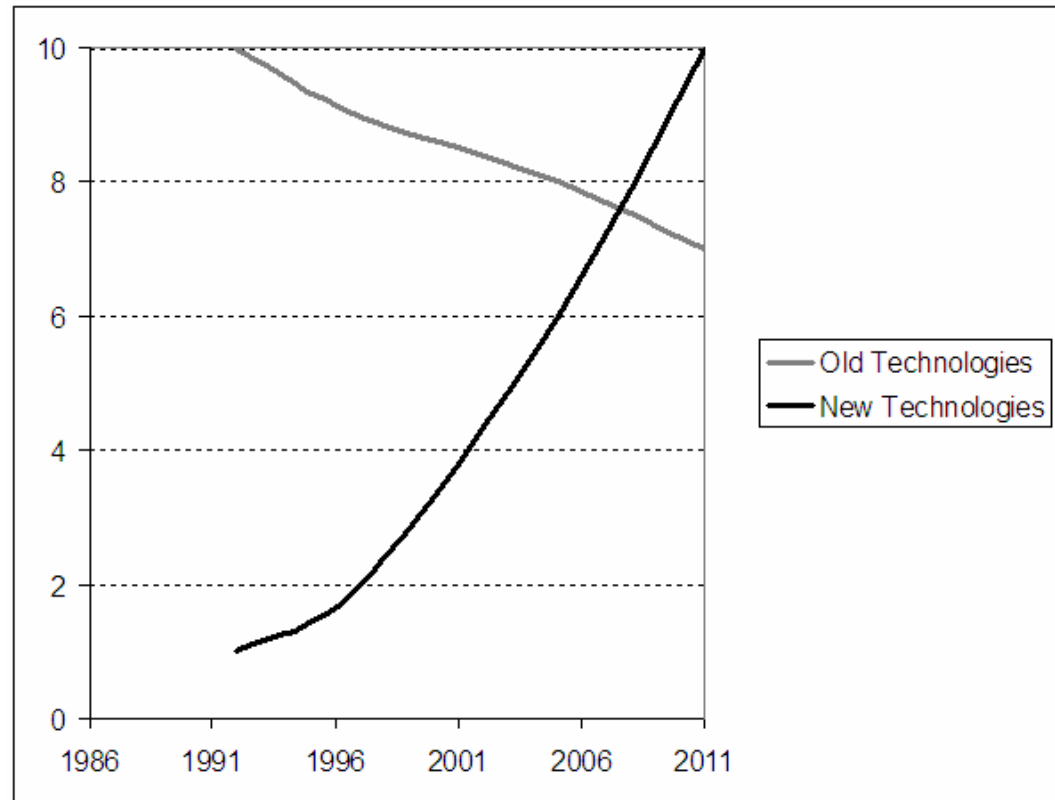
### Timeline Overview.

#### Old Technologies and skills

Mechanical  
Electrical  
Electronic  
Welding  
Hydraulics  
Pneumatics

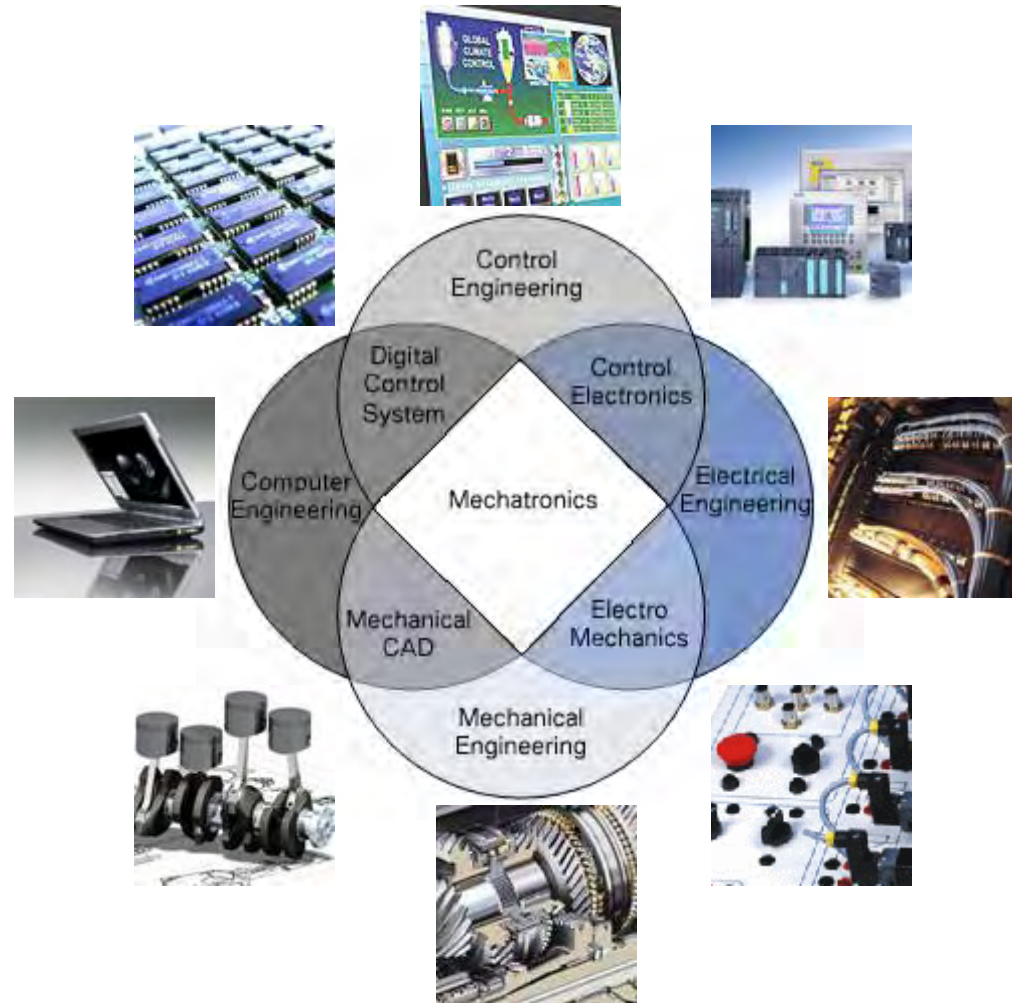
#### New Technologies and skills

Programming  
PC Literacy  
Communication networks  
CAD  
System integration  
HMI  
Robots  
Drives



# Q Africa. Challenges

**Ever changing industry**

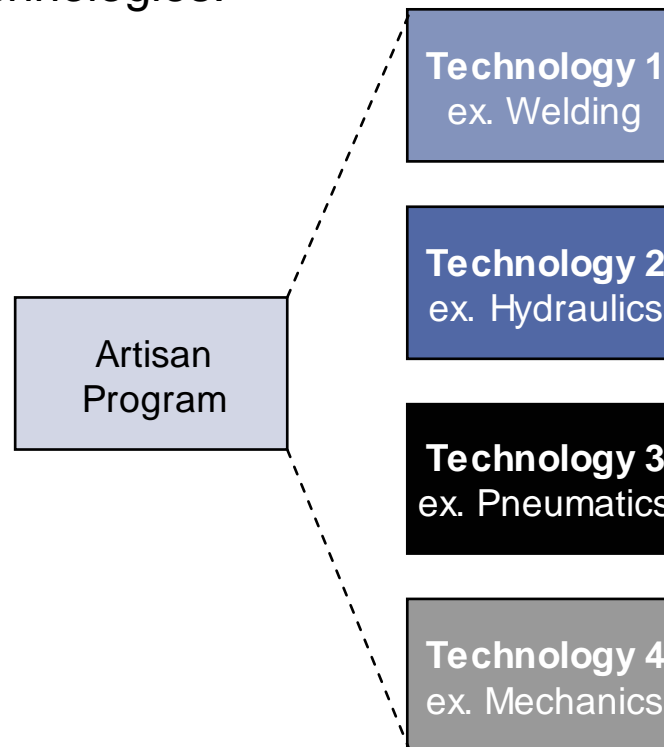


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Challenges BMW SA are currently facing.

**Technologies have changed.**

The traditional Artisan program's focal point is based on stand alone technologies.

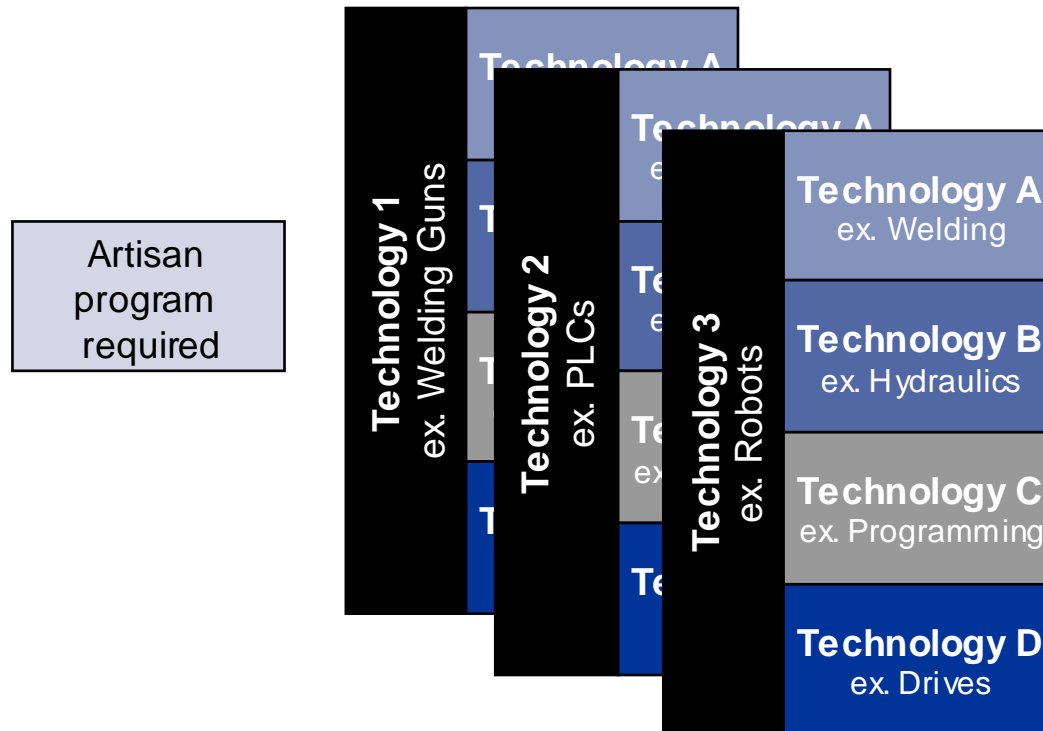


## Q Africa.

Challenges BMW SA are currently facing.

**Technologies have changed.**

Today technologies interact with one another via communication systems. Technologies are meshed together to form brand new technologies.

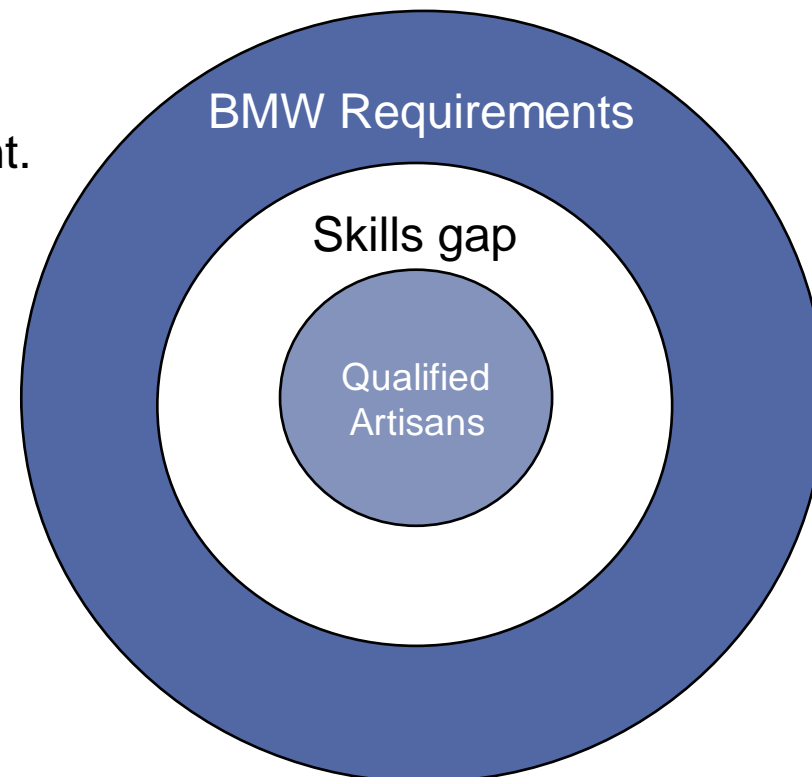


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BMW's endeavour to bridge the gap.

### Endeavours.

- Technical training.
- Technical development.
- Mechatronics.
- Versatility training.
- Research.



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## The Artisan of tomorrow.

### Attributes

- Sustainable.
- Versatile.
- Comprise indispensable and complex technical aptitude, dexterity and knowledge.
- Diverse problem solving skills.
- Able to work with complex and diverse problem solving tools and equipment.



## **Q Africa.**

### The need for Artisans in the motor industry.

#### **Highly skilled Artisans will ensure:**

- High quality products in local and export markets.
- Sustainability in local production markets.
- Organisational augmentation.
- Economy augmentation.

## **Q Africa.**

The need for Artisans in the motor industry.

**Thank you.**