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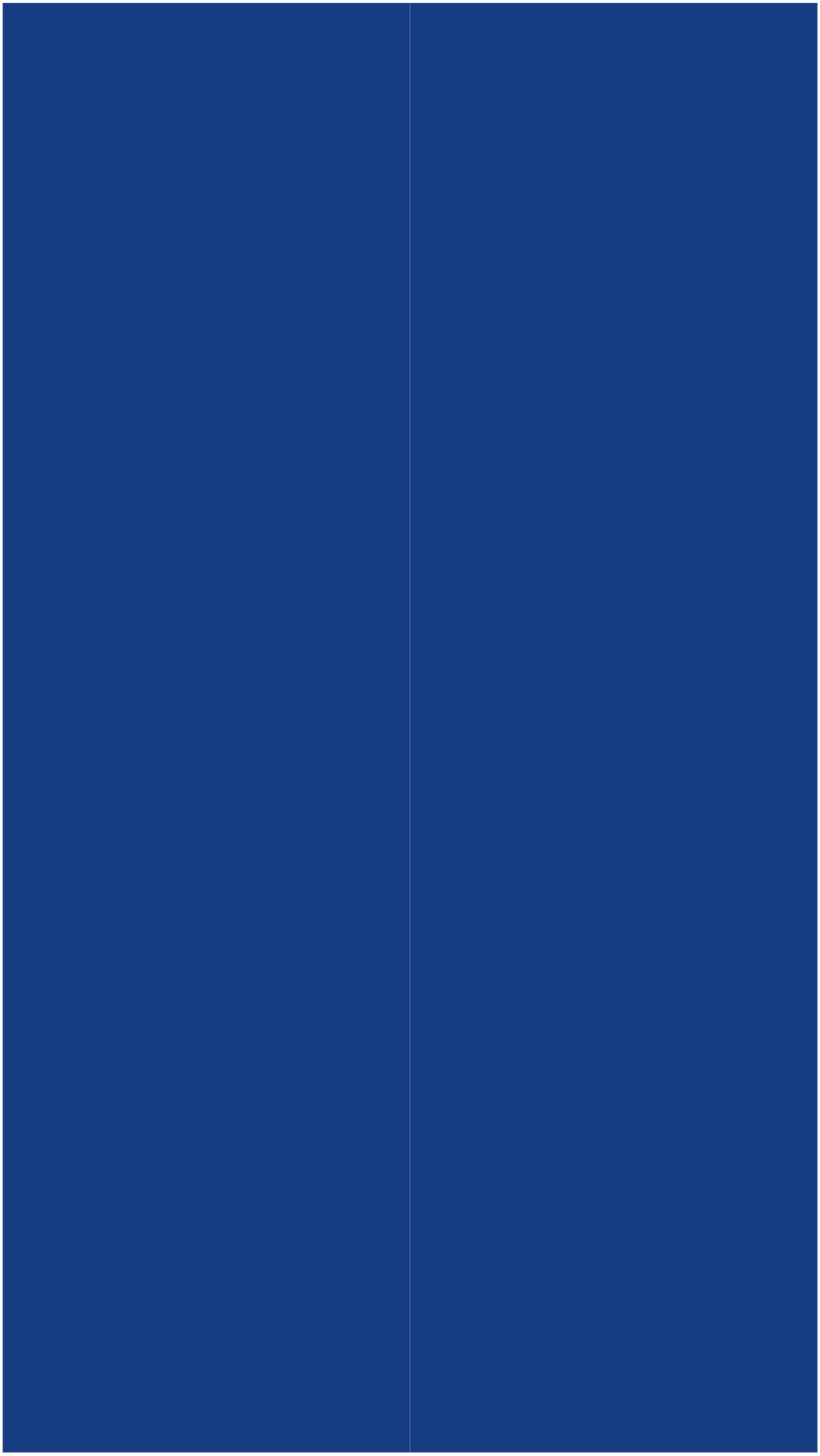
Kavala 1-2nd June 2016



TECHNOLOGY TRANSFER
FROM TRACK TO STREET

Why is Michelin involved in racing?

Why is the Racing Group a good platform to develop technologies?

Examples of tyre technology transfer

- Radial
- Dual compound
- Silica
- Compound technology

Other types of technology transfer

- Tyre Measurement devices
- Simulation tools
- Industrial processes

MICHELIN AND MOTORSPORT:
FROM TRACK TO STREET

- **A passion with victories for more than one hundred years**
- **Racing is In the DNA of the Brand to test and show innovation and product superiority**
- **Paris Brest Paris 1891** (removable tyre)
- **The Pit Stop in 1905 Gordon Bennett** (and the first Michelin Map)
- **First Win at Le Mans in 1923**
- **First F1 victory with a radial tire 1978**

…

A 3 PILLAR STRATEGY

Contributes to the Brand Image (Corporate Racing)

Develop and test technologies (Corporate Racing)

Develop a business through commercial racing activities (customer Racing)

OUR PHILOSOPHY

Participate in Racing Series which contribute to tomorrow's mobility

We are looking for challenges through

- Direct confrontation with competitors
- And / Or through regulations which make technology transfer possible and faster.

THE MAIN DISCIPLINES
AND WHY WE ARE THERE

THE RACING DISCIPLINES:
A FERTILE GROUND TO DEVELOP TECHNOLOGIES

Very high and challenging requirements from everyone in the discipline

The best riders/engineers in the world to assess the performance

a very precise feed back

Short time development loops

A continuous working process with many milestones (Races)

A group of people focused on a single objective

Good cohesion and efficiency

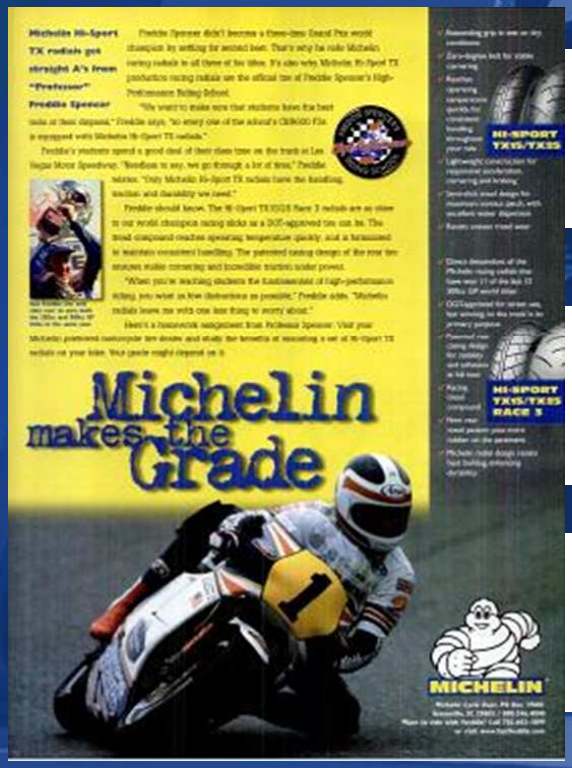
The performance of the product in the limelight

No excuses possible

THE QUESTION IS NOW TO MAKE SURE THAT WHAT IS USEFUL FOR VALENTINO ROSSI IS USEFUL FOR YOU WHEN YOU RIDE YOUR BIKE

EXAMPLE OF TYRE TECHNOLOGY TRANSFER

THE RADIAL TYRE BORN IN RACING FOR A BIKE TYRE



1983 First victory for a radial **Rear Tyre 1983** Freddie Spencer

1984 First victory using both Fr and Rr Randy Mamola **Michelin Radials**

1987 **MICHELIN® A59X/M59X** tyres started a revolution in high-performance tyres

Silica

Integrating silica into rubber compounds, replacing carbon black as a reinforcement

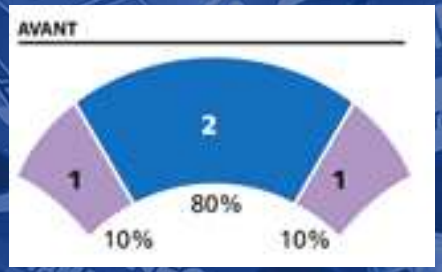
From competition...

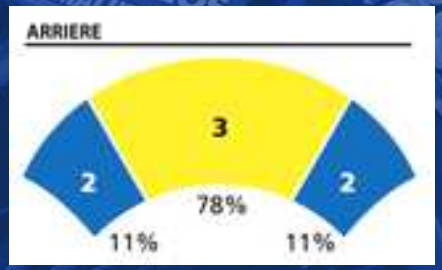
March 29, 1992, Suzuka,
Mick Doohan's victory in the rain.
Racing rain tyres continue to incorporate silica technology.

...to the road

MICHELIN® Pilot® Sport tyres were the first production tyres to use 100% silica-reinforced rubber compounds.
Road tyres benefit from improved performance both in the wet and in cold weather, without compromising tread life.

The 2-Compound Technology Born in Racing





From competition...

1994: Michelin's first two-compound tyres for asymmetrical tracks at Daytona

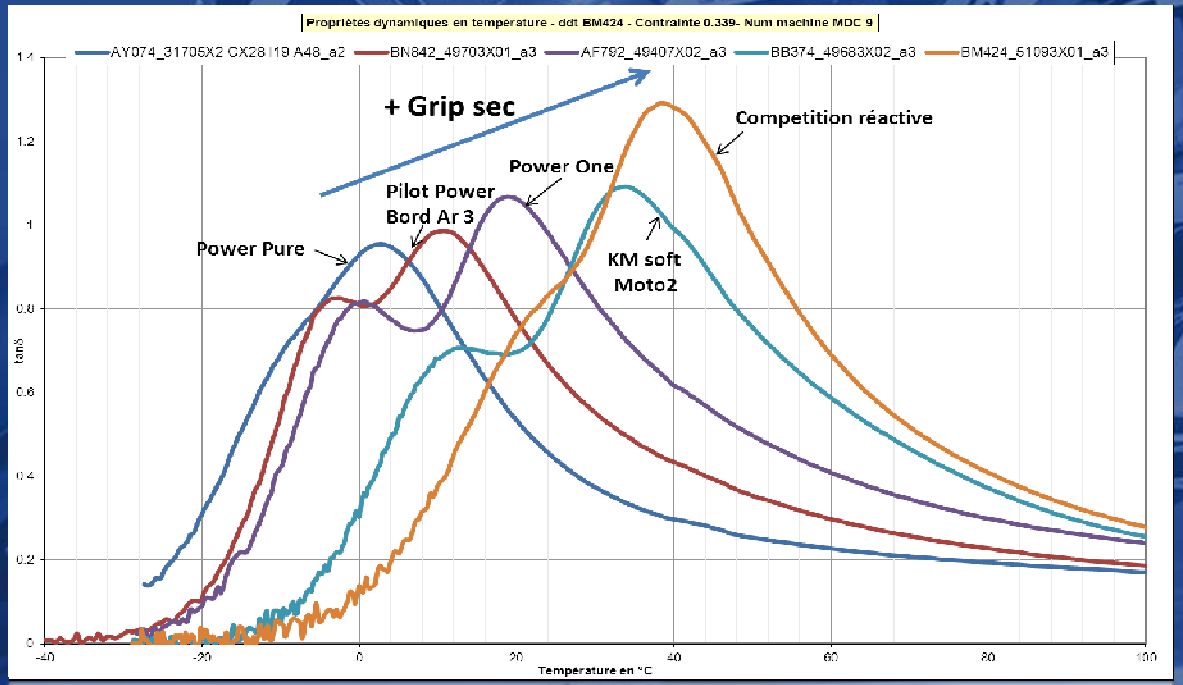
2002: all Michelin Moto GP Rears 3 or 4 different compounds.

...to the road

Power Race® tyres were the first road-legal tyres with Michelin 2CT,

Pilot® Power 2CT tires.

TODAY'S COMPOUNDS USED IN RACING WILL BE TOMORROW'S COMPOUNDS FOR PRODUCTION TYRES



Compound transfer: 3 years

INNOVATION THROUGH THE INDUSTRIAL PROCESS

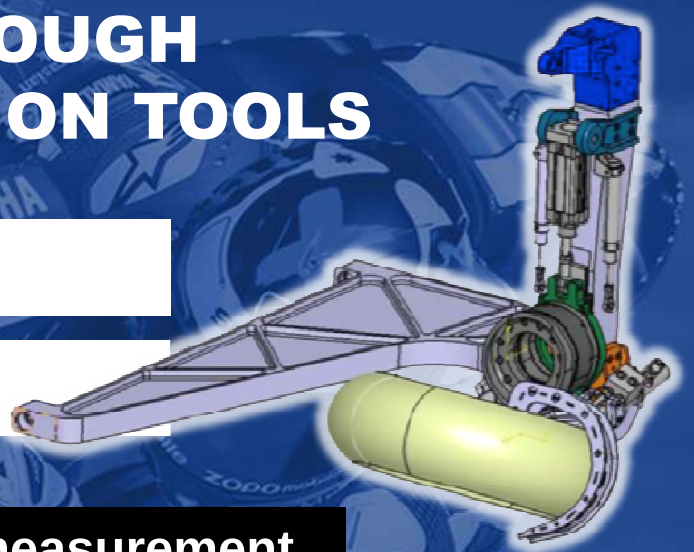
Our tyre building process is pushed to the limit.

When you make sticky tyres they will be sticky all the way through the building process….

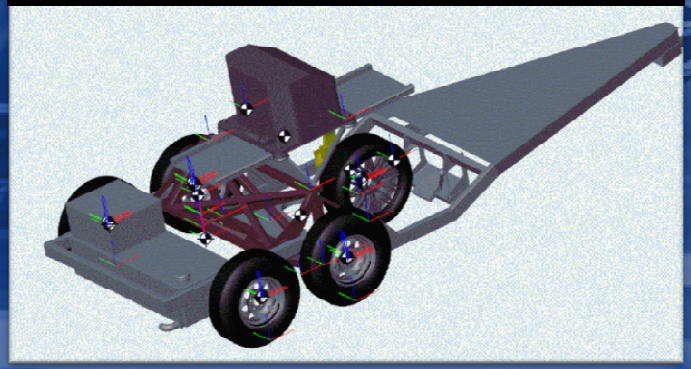
INNOVATION THROUGH TYRE CARACTERISATION TOOLS

Tyre Forces measurements on real surfaces

Leaning angle over 60°



5th wheel measurement



Summary…transfers can happen

In the tyre technologies

In the measurement procedures

In the industrial tools domain

THE RACING DEPARTMENT IS THE LABORATORY OF THE LABORATORY IN THE INNOVATION STRATEGY

DO YOU HAVE ANY QUESTIONS?