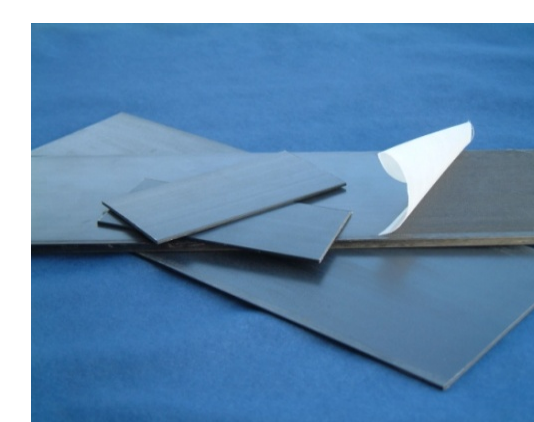
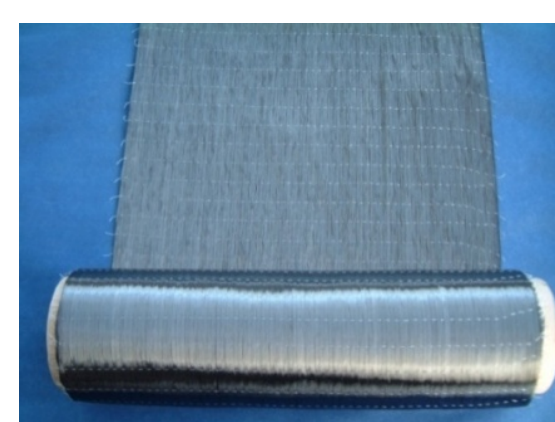


## FRPs solving the demands from the modern society

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FRPs (Fibre reinforced polymeres) of **high strength**, low weight and **high durability** as reinforcement is a most promising approach when solving the challenges of **upgrading, repairing** and expanding **existing structures**. Also this material can be used to creating new advanced **maintenance free structures**. Developments of **new materials** and **new design** methods are vital for achieving the goal of reducing construction time, costs and CO<sub>2</sub> emissions

### Repairing and upgrading of the infrastructure

- Deteriorating structures
- **Increasing traffic** loads
- The transport patterns have changed
- **Larger** part of the **population lives in the large cities**.

#### The consequence

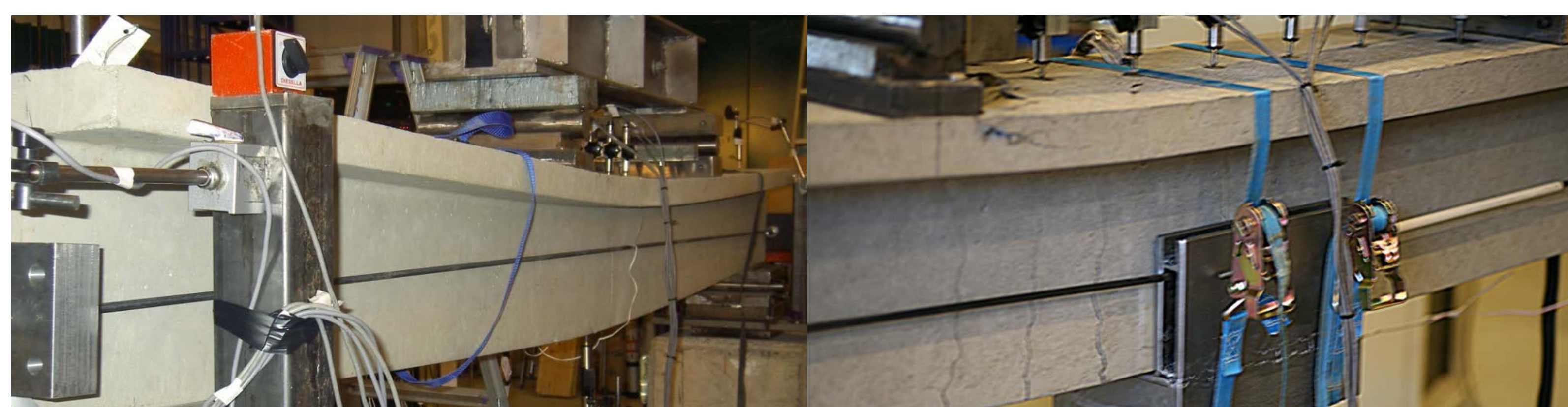
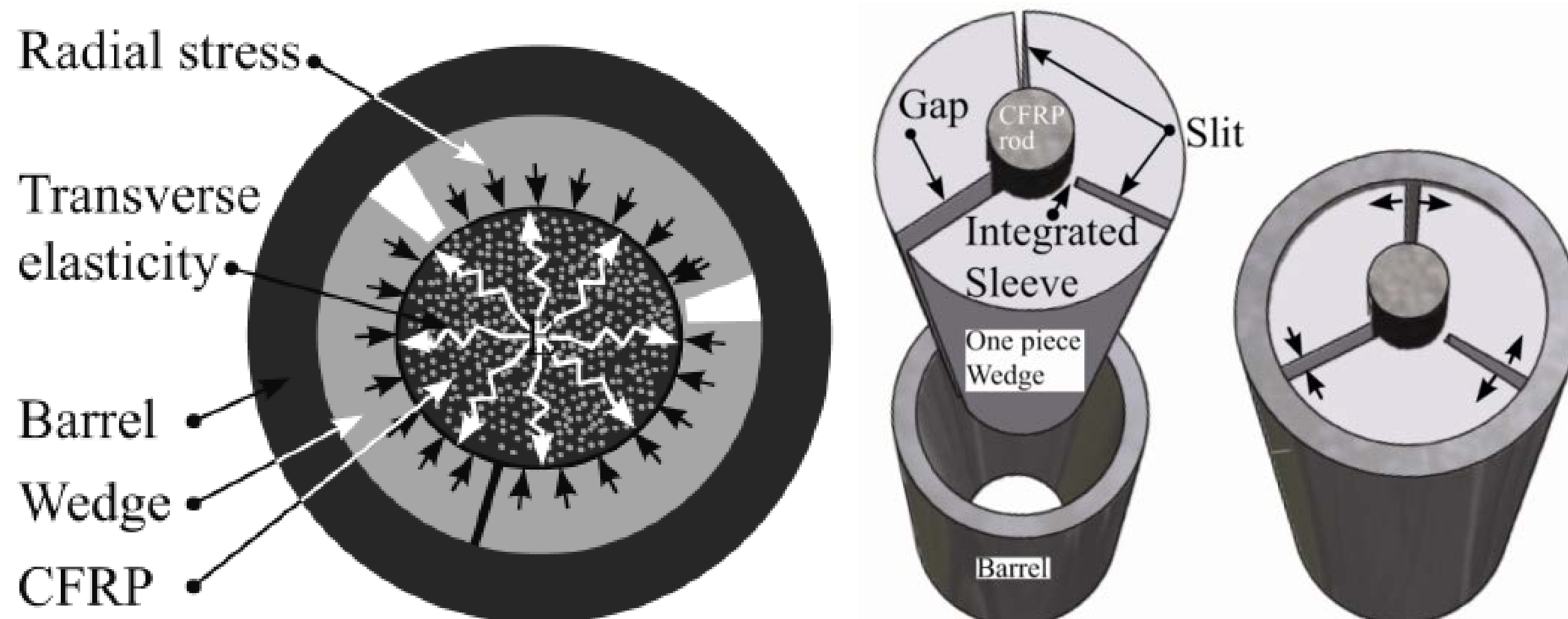
- **Maintaining and upgrading** of existing structures
- faster construction methods
- increased capacity demands
- methods to reduce the traffic delays
- Cost efficient and sustainable solutions

EU use 1.5% of its GDP on maintenance, operating of infrastructure. The city population in the UK is expected to rise from 79% (1950) to 92% (by 2030), in France from 54% (1950) will rise to 83% (by 2030) and in China from 13% (1950) to 61% (by 2030)

### Research and improvements on FRP anchorage and connections

Extensive improvements and research is needed to ensure **high safety demands**, long term performance (50-100 years), **low inspection needs** - as a civil engineering structure is difficult to access, **repair or replacement** without causing major **traffic delays**

#### Novel anchorage method and full scale testing



#### State of the art anchorage- and connection testing

