Fields of application - Plasma Surface Engineering

- **Textile sector:**
  - Pre-treatment of fibres before coating
  - Pre-treatment for better dyeability or water- and dirt-repellent coatings

- **Machine tools and plant engineering:**
  - Hardening step to prevent steel from bending -> Plasma nitriding of steel
  - Higher quality tools with DLC or carbon/diamond coatings
  - Blank corrosion protection for production lines (especially for food processing to avoid flaking of protective coatings)

- **Automotive and aerospace / maritime:**
  - Many components with hardened and friction-reducing coatings, so-called tribological coatings in gearboxes, in drives, piston rings, radial shaft seals (friction reduction), etc.
  - Corrosion protection -> corrosion can be prevented with correct PVD coating
  - Bonding agent for adhesives and paints
  - Undermigration resistant sealing adhesions
  - Protection against hydrothermal aging
  - Interface for plastics processing
  - Antibacterial surface coatings for interiors
  - Glass coatings and optical coatings
  - Decorative coatings inside and outside the vehicle
  - Active anti-fouling

- **Energy sector:**
  - Interface for the production of rotor blades in wind energy
  - Adhesion promoters for solar modules
  - Anti-aging coatings for PV
  - Abrasion and corrosion protection for reflectors of solar thermal power plants

- **Medical technology**
  - Coatings for the storage of antibiotics, e.g. on implants
  - Layers for controlling cell adhesion

- **Facade elements (glass):**
  - Thermal protection layers
  - Optical layers for reflection and thermal insulation

Product examples:

- Cell phones
- Bathroom faucets, e.g. all Grohe faucets
- Door handles
- Car knobs
- Eyeglass lenses / frames??
- Organic photovoltaics
- Fuel cells (hydrogen batteries)
- Foils and all kinds of plastic coating
- Medical implants
- PET bottles (internal coating)