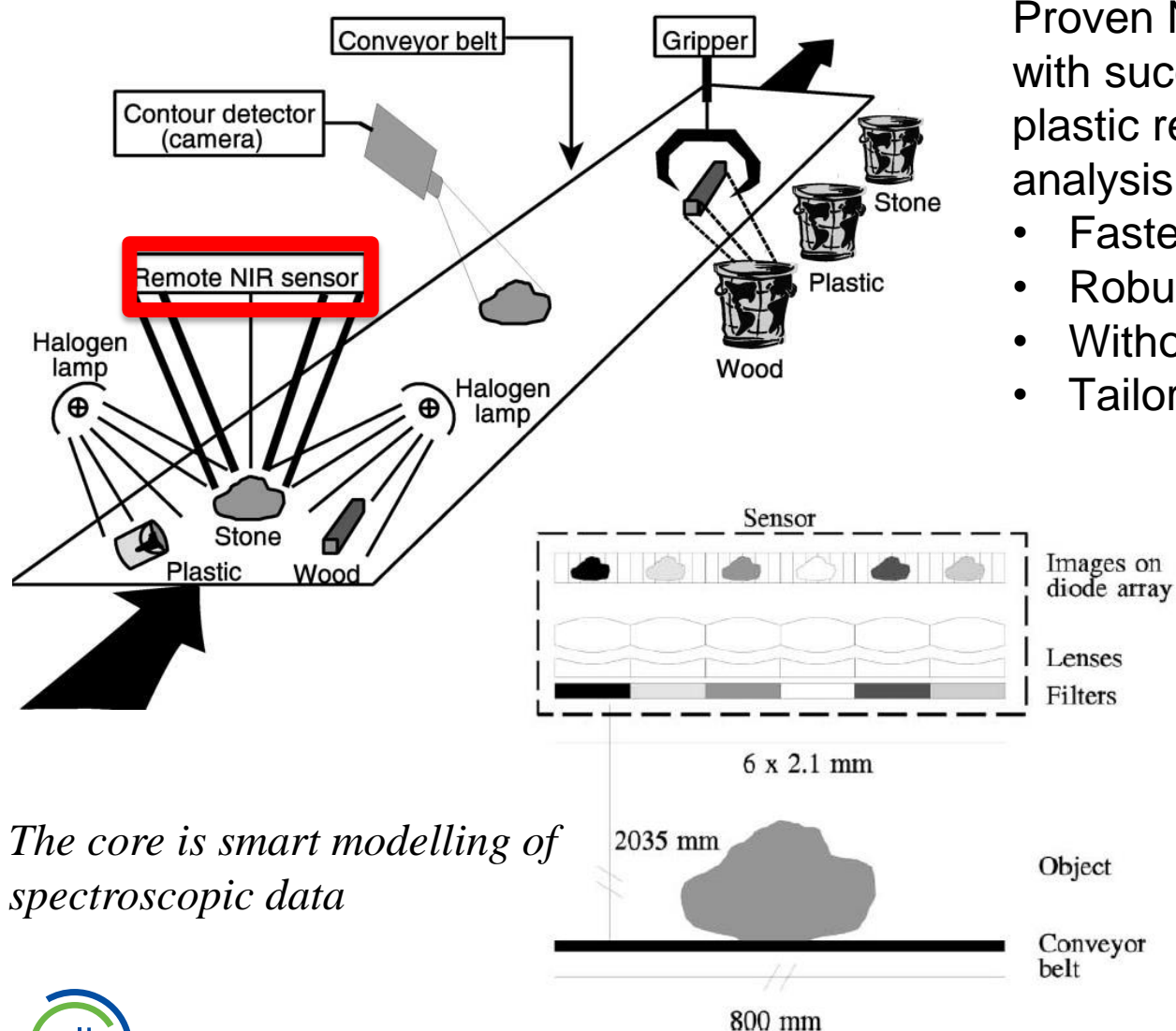


A smart conveyor belt for enriching and recycling

- *Thematic Areas/Technology/Topic of focus + key elements of the idea/problem:*
In mining and recycling, being able to quickly identified CRM from complex material combinations will benefit industry. RU has developed a technology based on NIR sensors and chemometrics for high throughput screening of specific material. This technology has been successfully demonstrated for demolition waste and plastic recycling (TRL 6). Technology is suited for detection of CRM in fluids.
- *Expected synergies and complementarities:* impact in multiple industries, complementary to existing LIBS technology, potential to benefits for multiple RM partners.
- *Outcomes:* a smart identification and/or separation system for CRM. Depending on the partners either an integrated conveyor line suited for CRM analysis or a stand alone smart measuring module to be implemented in industrial processes (TRL 8).
- *Market & business opportunities:* fully automated and more efficient process suitable for multiple markets.
- *Identified partners:* Radboud University, Swerea and TU Delft
- *Additional partners:* Industry in (deep-sea) mining and/or recycling, in particular INESC tec, Cronimet Scandvic

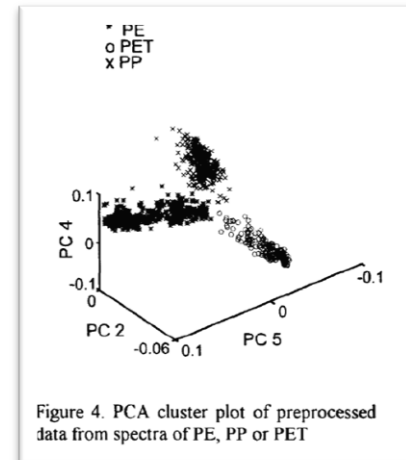




The core is smart modelling of spectroscopic data

Proven NIR sensor for identification of specific material with successful case studies in demolition waste and plastic recycling. Upscaling in order to make the analysis:

- Faster and on-line
- Robust
- Without expert intervention
- Tailored to Critical Raw Materials



Consortium partners:

Fig. 2. A schematic overview of the spectroscopic sensor.