

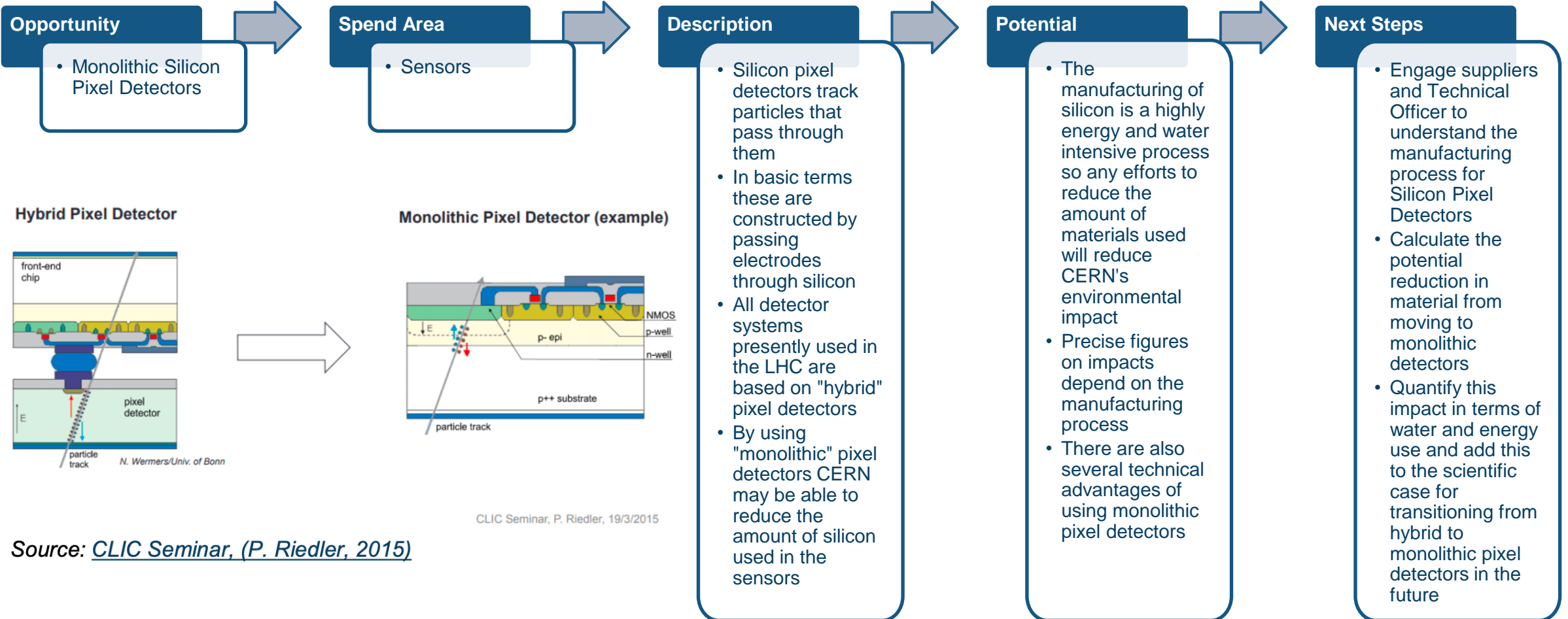
CERP3 Decarbonization Procurement family 07

Particle and Photon Detectors

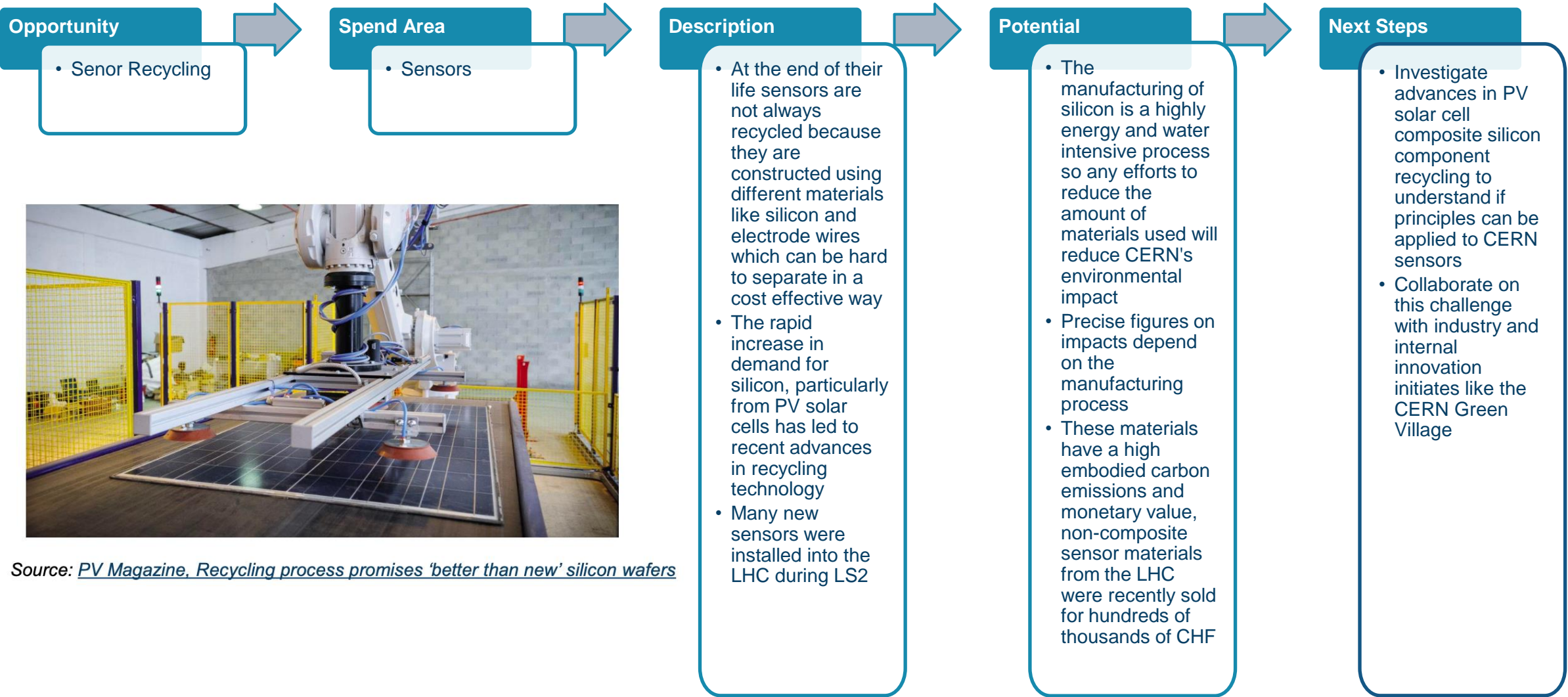
Current Situation in Procurement family 07 – Particle and Photon Detectors

- ▶ Sensors are very specific to CERN's requirements and there are few suppliers that can make these.
- ▶ Sensors are typically only bought during Long Shutdown periods so demand is not very consistent.
- ▶ Silicon wafers are fragile so require a lot of packaging.
- ▶ There is additional spend the likes of Taiwan Semiconductors through brokers like IMEC VZW and Global Foundries US2 which is captured in Procurement Family 3: Electronics and Radio Frequency.

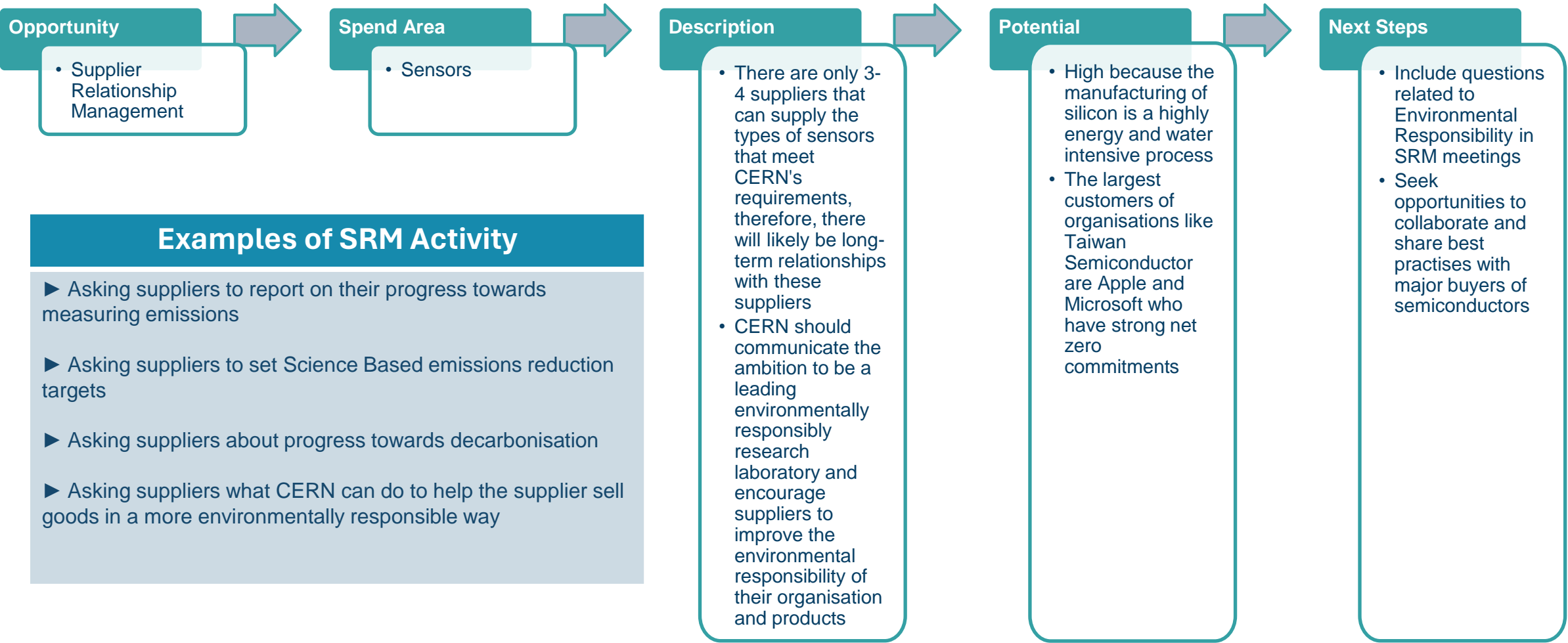
Monolithic Pixel Detectors may offer an opportunity to reduce the amount of silicon in sensors and improve the technical performance



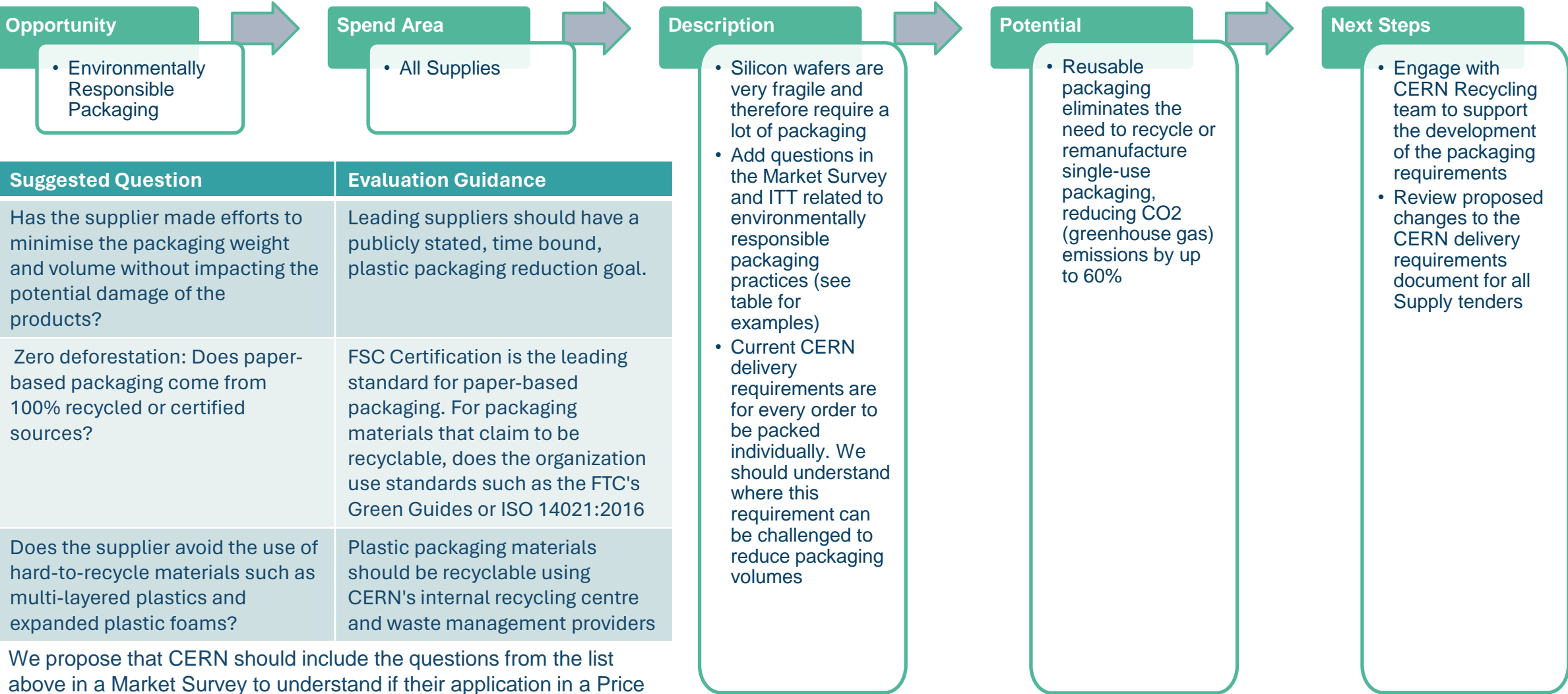
Advances in silicon recycling technology from the PV industry could present an opportunity for recycling of composite sensors from particle detectors



Where CERN have long standing relationships with certain suppliers time can be invested in supplier engagement around Environmental Responsibility



If packaging volumes cannot be reduced because supplies are fragile then CERN can ask suppliers to use packaging with a good recyclability



We propose that CERN should include the questions from the list above in a Market Survey to understand if their application in a Price Enquiry / ITT would significantly limit the competitiveness of bids

For Environmentally Responsible Procurement actions that rely on supplier collaboration CERN should prioritize working with engaged suppliers

