

START DATE: 1 OCTOBER 2013
 DURATION: 36 MONTHS
 TOTAL BUDGET: € 5.1 MILLION
 FUNDING: € 3.6 MILLION

PROJECT OVERVIEW

T-REX, coordinated by IK4-TEKNIKER, is a research project funded from the European Commission under grant agreement n° 609005 that promotes **integrated product-service solutions or product-service systems** that allow a shift from value in exchange to value in use to satisfy customer needs.

The project gives support for the transition, in the capital goods industries, from the "traditional" business models to the "new" business model. This objective has been achieved by developing and experimenting conceptual tools for different domains, i.e. machine tools, transportation (forklift trucks) and robot solutions. T-REX has developed:

- A new **Service-Oriented Business Model** reference framework
- An improved design of the products by the adoption of the **Design -for-X** approach
- The re-engineering of traditional support services by using **Service Engineering** techniques
- The increasing of product availability and the reducing of the Total Cost of Ownership by developing **Condition based Maintenance** technologies and a **Fleet Management** platform

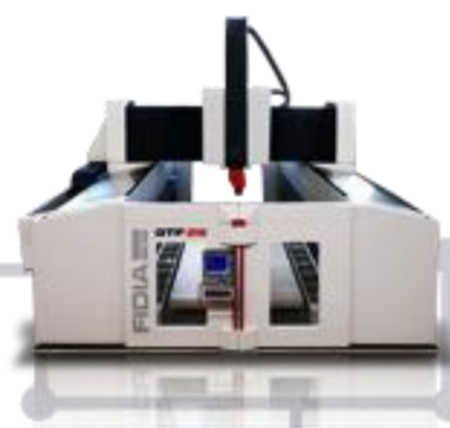
MAIN TARGET MARKETS

Three practical demonstrators in the transportation (forklift trucks), machine tools and robotic systems domains are being developed to be experimented. Demonstrators will show through the new business platform that it is possible to create new business models that can achieve up to 70% of component re-use, a lifecycle extension in the range of 25-30%, and a reduction of maintenance service costs by 15-30%, which can be translated into 25 to 30% of savings on Total Cost of Ownership.

Transportation



Machine tools



Robotic Systems

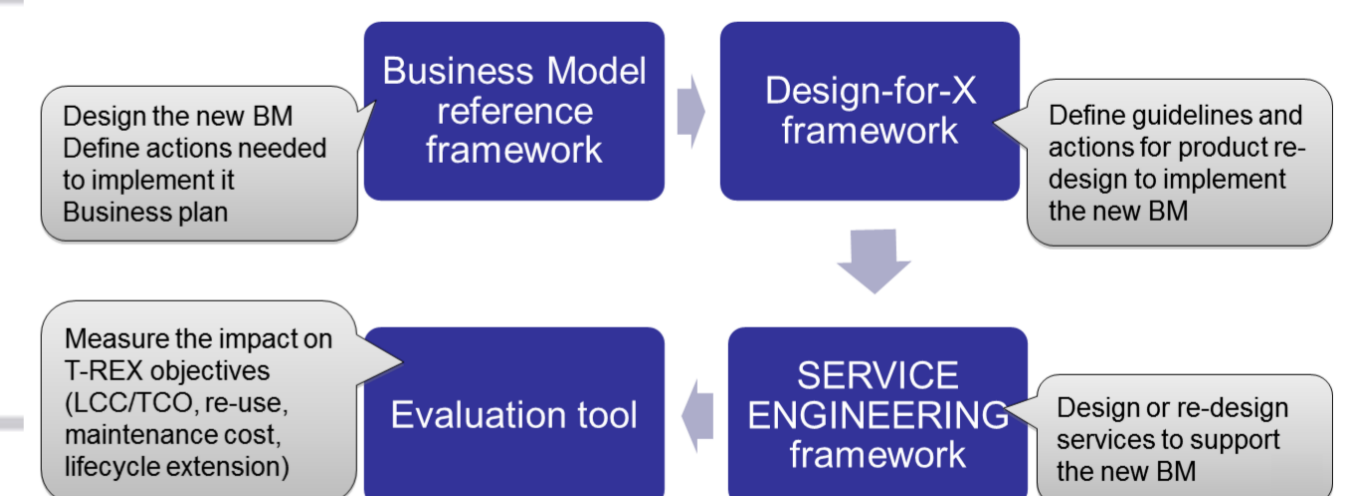


EXPLOITABLE RESULTS

Main project results have been characterized from a holistic approach taking advantages of the synergies between technological and industrial partners to set up five Global Key Exploitable Results named KER G1 to G5.

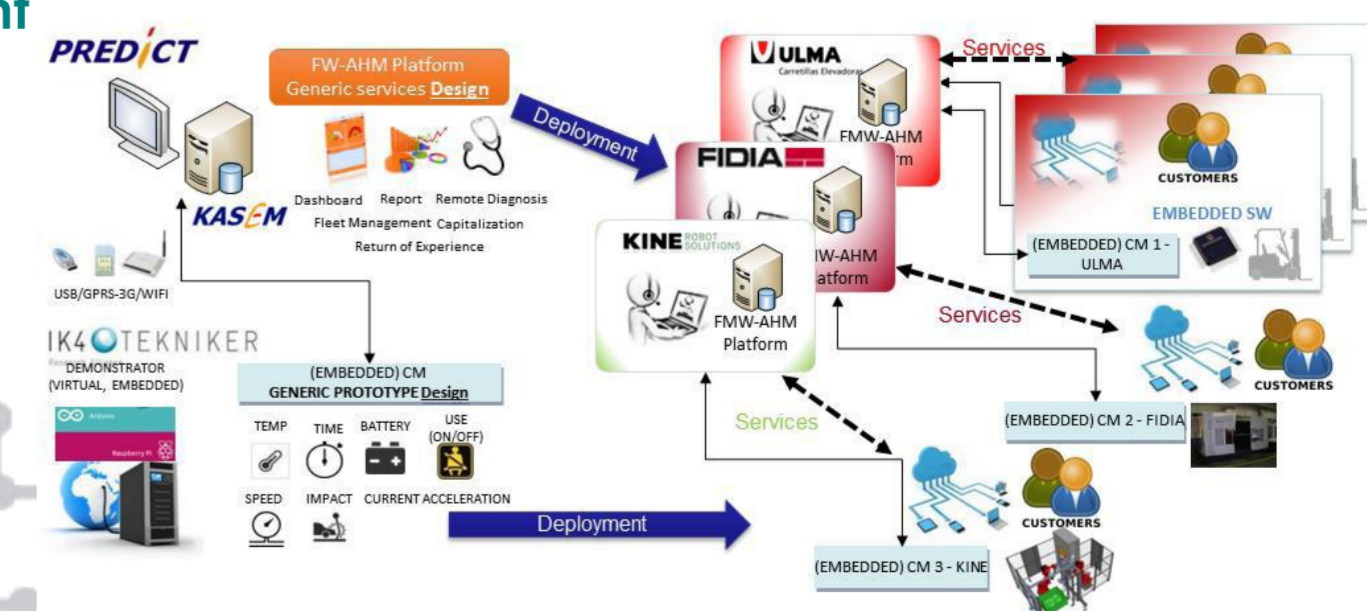
KER G1: Service-Oriented Business Modelling process and toolset

This result offers a methodology to support companies at developing Service Oriented Business Models for new Product-Service Systems implementation by using sequential steps, guidelines and practical tools (mind maps, context analysis, service portfolio, etc).



KER G2: Platform for an easy to deploy Predictive Maintenance solution for Fleet-Wide Asset Health Management

This platform supports the deployment of the PdM (or CbM) solutions with a distributed architecture, based on easy to deploy low cost devices, already defined and tested, which includes standard local monitoring algorithms and software to be embedded in different hardware solutions depending on the range of complexity and performance requested.



KER G3, G4 and G5 propose new service solutions offering an integrated platform for Condition based Maintenance (CbM) and Fleet Management respectively in the Forklift Truck, Machine Tool electro-splindle and Robot Cells products.