

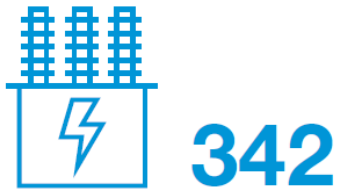
stephen.a.marland@nationalgrid.com
Sept 2018

nationalgrid

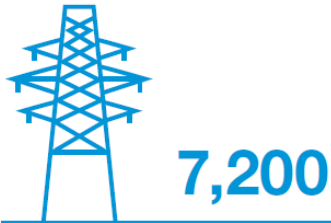


UK - Regulated

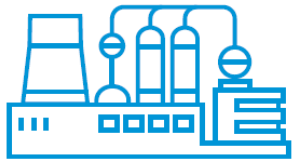
342 UK transmission substations



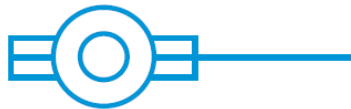
7,200 km of UK overhead line



618 above-ground UK gas installations

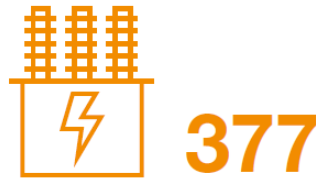


7,660 km of UK high-pressure gas pipe



US - Regulated

377 US transmission substations

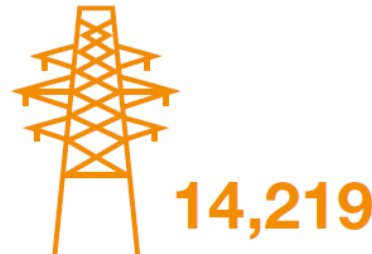


763

US distribution substations



14,219 km of US overhead line



3.6m gas distribution customers across Northeastern US



Global – Non-Regulated

2 Interconnectors and **3** in development



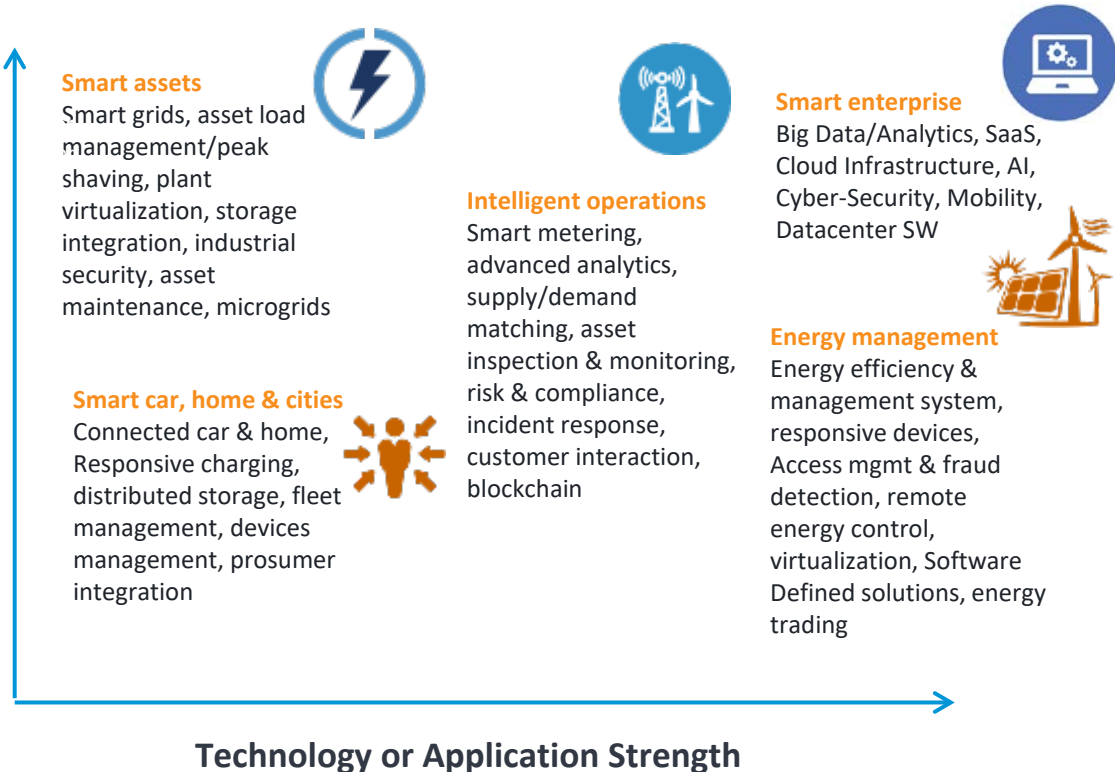
15,800 km of sub-sea high-voltage direct cable

GrainLNG
20% of UK gas capacity

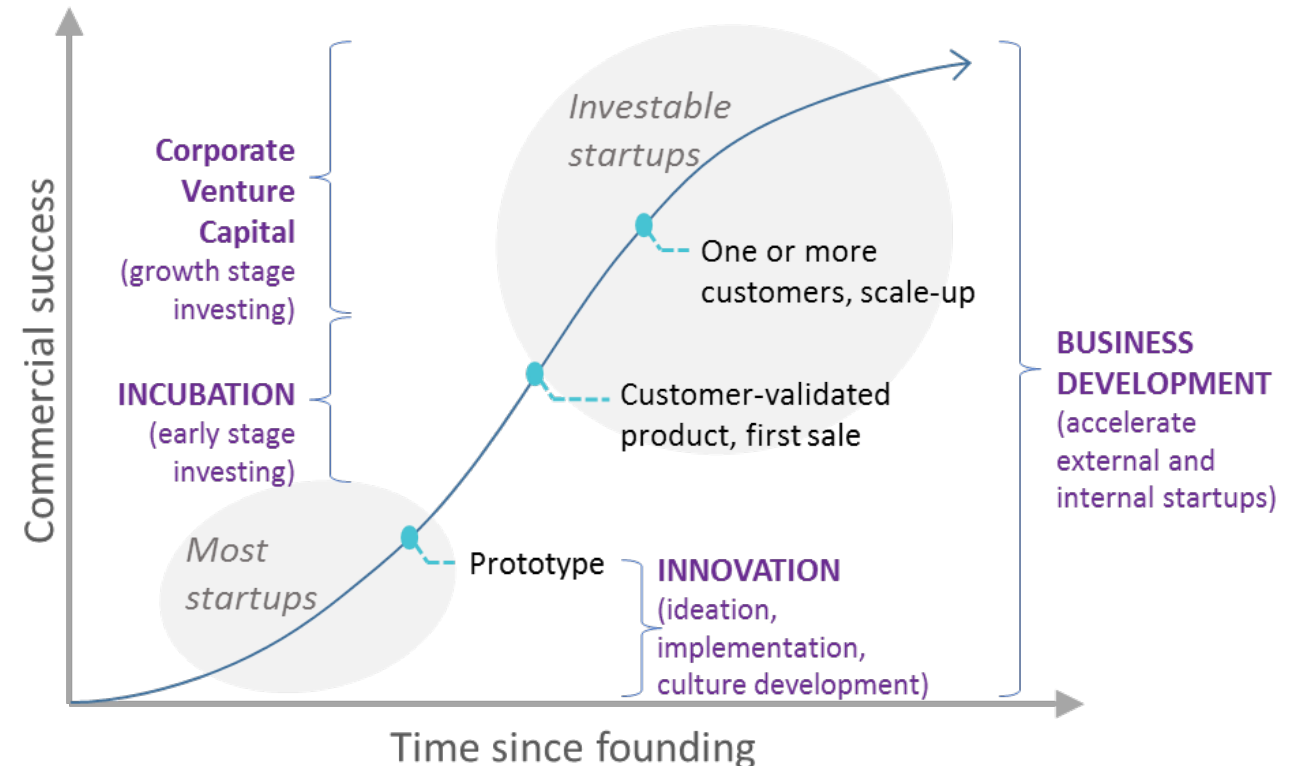


Over **12m** gas meters

Venture Investing Focus



How are we set up



Structured Systems Data



- ✓ Profiling power usage / analytics – DSR options
- ✓ Identifying alternative solutions – PV

Human Language



- ✓ Chatbot customer interface services
- ✓ Data interface solutions

Real Time Data



- ✓ Local / micro grid predictive grid management
- ✓ Supply / Demand energy forecasting
- ✓ Energy storage / mobility simulation and system reserve capability

Consumer Behaviour



- ✓ Customer specific tariffs – auto switching
- ✓ Energy efficiency product selection and optimisation

Human – Multi Spectrum Vision



- ✓ Data interface & classification solutions
- ✓ Multi-vision (IR, Ultra Violet, Lidar, visual interpretation) asset inspection analysis
- ✓ Maintenance, repair and replace prediction

Real Time decision Support



- ✓ Real time engineering augmented assistant
- ✓ Digital simulation and risk evaluation – predictive assessment
- ✓ System wide grid balancing support

stephen.a.marland@nationalgrid.com

national**grid**

