We are creating more data than ever before. Using data-intensive science, UK experts are working together to make the most of it.

**DATA-INTENSIVE SCIENCE IS USED TO SOLVE PROBLEMS:**

- That need a large amount of processing power
- That need a large amount of memory
- That have lots of data
- That need to be solved in volume

**IT IS A TRANSFORMATIVE DIGITAL TECHNOLOGY**

Size is measured in petabytes (pb) rather than gigabytes (gb)

- 1 pb = 1,000,000 gb
- 1 pb = 15,625 iPhones*
- 20 pb = 312,500 iPhones*

This is the amount of data held on JASMIN, a UK ‘super-data-cluster’ that handles environmental science data.

20 pb

*Standard iPhone 8 with 64gb storage.

**IT’S BEING USED TO TACKLE LOTS OF DIFFERENT CHALLENGES**

**FOR SCIENCE**

- Over 1500 users are working with JASMIN, a unique UK system designed to tackle 21st century environmental data challenges.
- A team at STFC’s Scientific Computing Department developed and operates part of the global e-Infrastructure that enabled the successful search for the Higgs boson.

**FOR INDUSTRY**

- Hartree Centre’s InCEPT™ process exploits their experts’ research expertise, bringing it to bear on to industrially relevant problems.
- Hartree Centre are also working with LCR 4.0 to help SMEs solve their manufacturing challenges using big data.

**FOR EVERYONE**

- By working with laser scientists, computing experts are working to find new, localised cancer treatments.
- STFC experts using high performance computers have visualised how blood flows through implanted blood pumps, used by patients waiting for a heart transplant.

These are just a handful of examples of how we can use data-intensive science to shape the world around us. To find out more follow @STFC_matters and @HartreeCentre