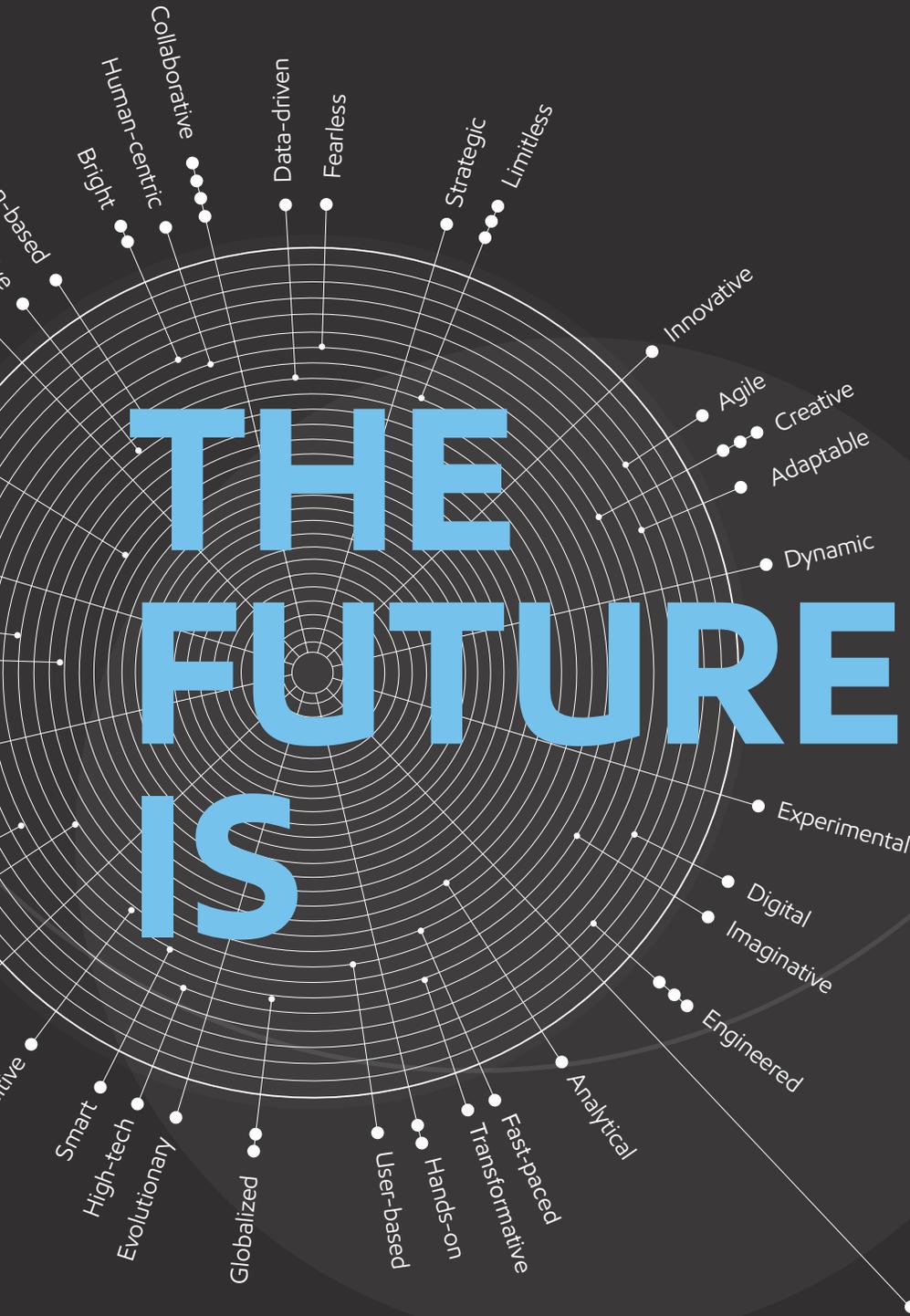


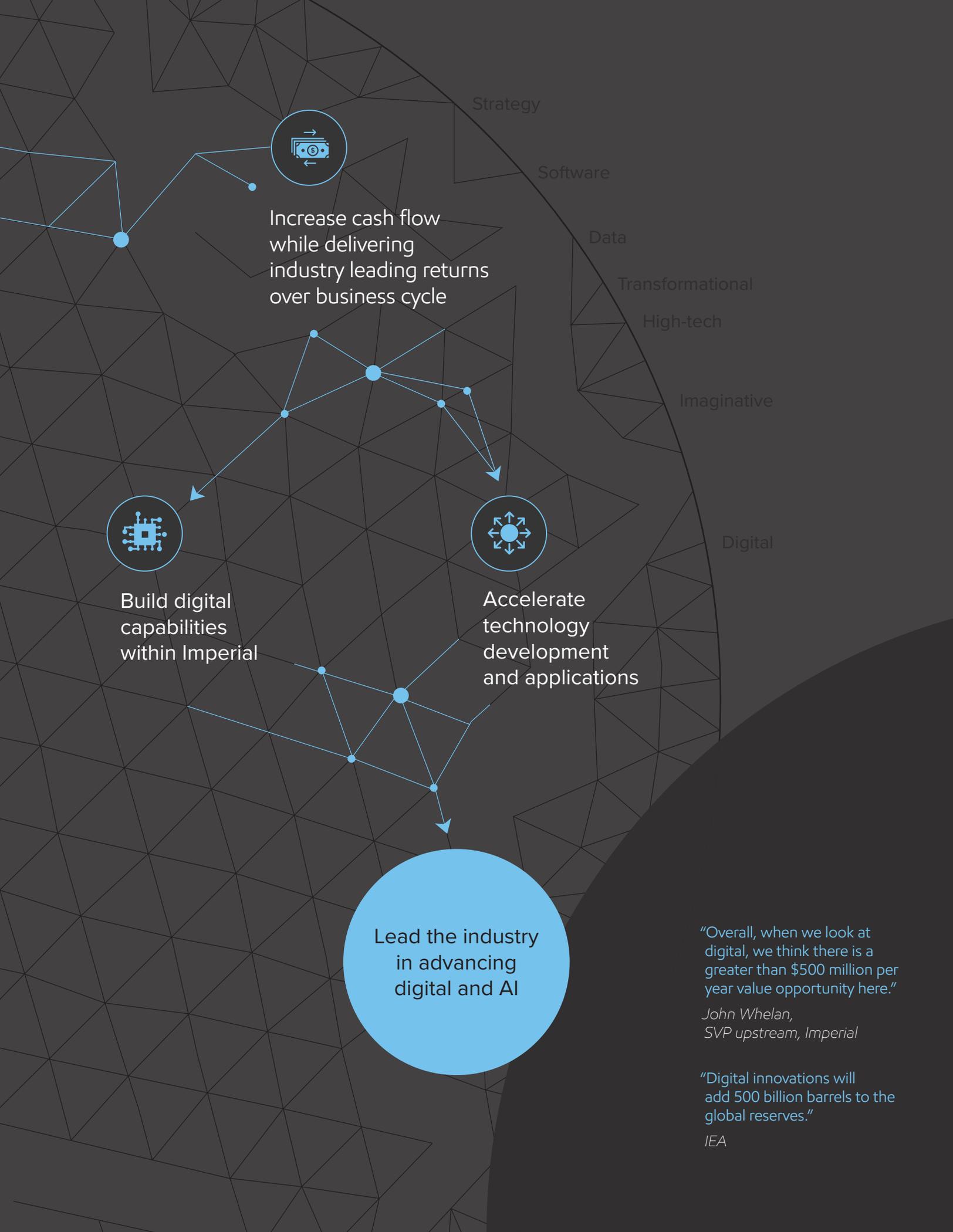
THE FUTURE IS



Our mission

Passion
Purpose
Integrated
Agile
Imaginative
Design
Collaboration
Software
Data





Strategy

Software

Data

Transformational

High-tech

Imaginative

Digital

Increase cash flow while delivering industry leading returns over business cycle

Build digital capabilities within Imperial

Accelerate technology development and applications

Lead the industry in advancing digital and AI

"Overall, when we look at digital, we think there is a greater than \$500 million per year value opportunity here."

*John Whelan,
SVP upstream, Imperial*

"Digital innovations will add 500 billion barrels to the global reserves."

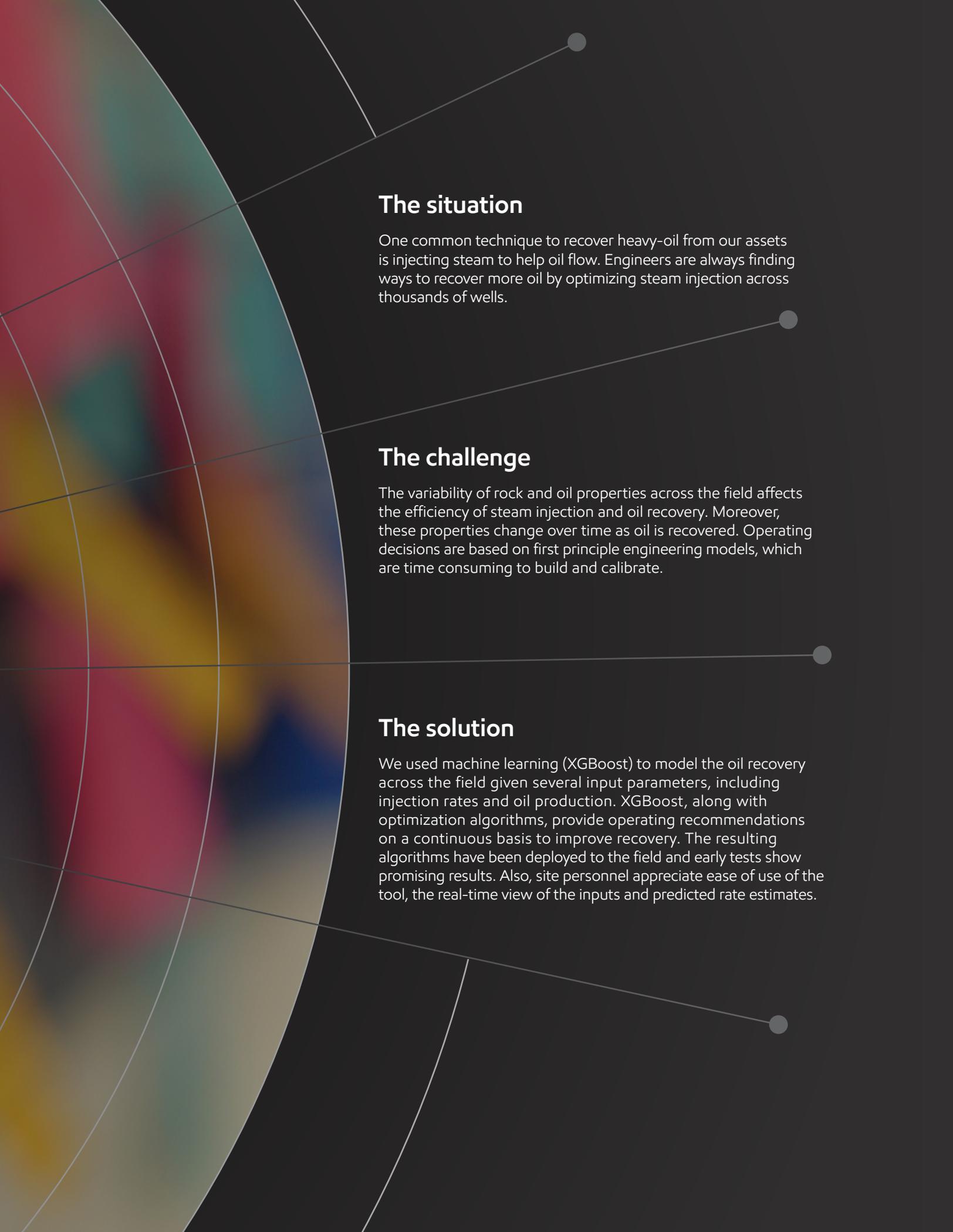
IEA

Case study

Uncovering opportunities
for better production

“We’re always seeking new ways
to optimize production in the
oilfield. I’m leveraging cloud
based AI technology to help!”

Reservoir engineer, Imperial



The situation

One common technique to recover heavy-oil from our assets is injecting steam to help oil flow. Engineers are always finding ways to recover more oil by optimizing steam injection across thousands of wells.

The challenge

The variability of rock and oil properties across the field affects the efficiency of steam injection and oil recovery. Moreover, these properties change over time as oil is recovered. Operating decisions are based on first principle engineering models, which are time consuming to build and calibrate.

The solution

We used machine learning (XGBoost) to model the oil recovery across the field given several input parameters, including injection rates and oil production. XGBoost, along with optimization algorithms, provide operating recommendations on a continuous basis to improve recovery. The resulting algorithms have been deployed to the field and early tests show promising results. Also, site personnel appreciate ease of use of the tool, the real-time view of the inputs and predicted rate estimates.

Digital value

Imperial is well positioned to leverage digital

Organizational readiness

Support from CEO and senior leadership: commitment to long-term vision and support

Dedicated digital group that leverages battle-tested operating principles to engage with the business

Access to top-tier talent, both internal/external

Open, collaborative environment to foster innovation and agility

Top-down commitment to challenge the status quo

Strong support and awareness across the company

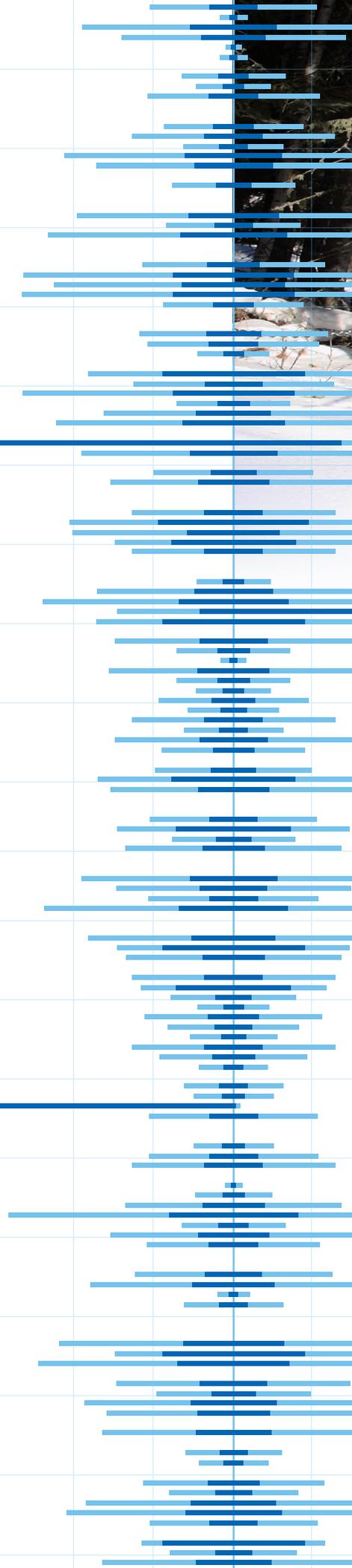
Infrastructure

Data

Well maintained historical data across operations, managed in accordance to modern IT standards

Computing

Access to powerful cloud computing resources to facilitate large, high-end modelling projects





Opportunity pipeline for application of digital tech

Significant opportunity pipeline identified across 10+ areas to create substantial value for Imperial, constrained only by accelerator bandwidth

Large opportunity pool across focus areas



Reliability improvement



Production optimization



Surface facilities operations effectiveness



Mine operations optimization



Maintenance efficiency



Well workover efficiency



Project execution excellence



Supply chain optimization



Safety, security, health and environmental excellence



Management & controls effectiveness



Digital Accelerator's
arsenal is built on

**Cutting-edge
technologies**

**Big data
and analytics**

Analysis of large data sets
to identify new patterns

**Cloud
computing/storage**

Highly scalable, variable-cost storage
and processing on demand

**Collaborative
technology platforms**

Real-time communications and tracking
Every asset, equipment, employee
always connected (connected worker)

**Real-time comms.
and tracking**

Every asset, equipment, employee
always connected

**Mobile connectivity
and AR**

Mobile connectivity
and augmented reality

Sensors

Low cost, low power, connected
sensors capturing spatial and
environment information

3D scanning

Analysis of real-world object or environment to
collect data on its shape/appearance

Virtual reality

Interact more naturally with
digital devices and services

**Additive
manufacturing**

Print objects and parts on demand with
increasing precision, and range of materials

**Unmanned
vehicles**

Autonomous, low-cost vehicles
able to perform complex tasks

**Robotics and
automation**

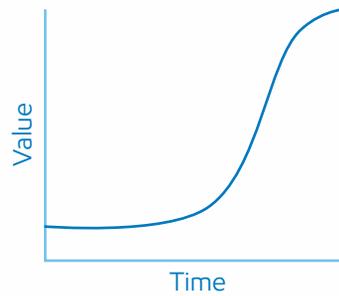
Intelligent robots assist
with complex assignments

Digital Accelerator

Leverages agile ways of working
in order to accelerate value capture

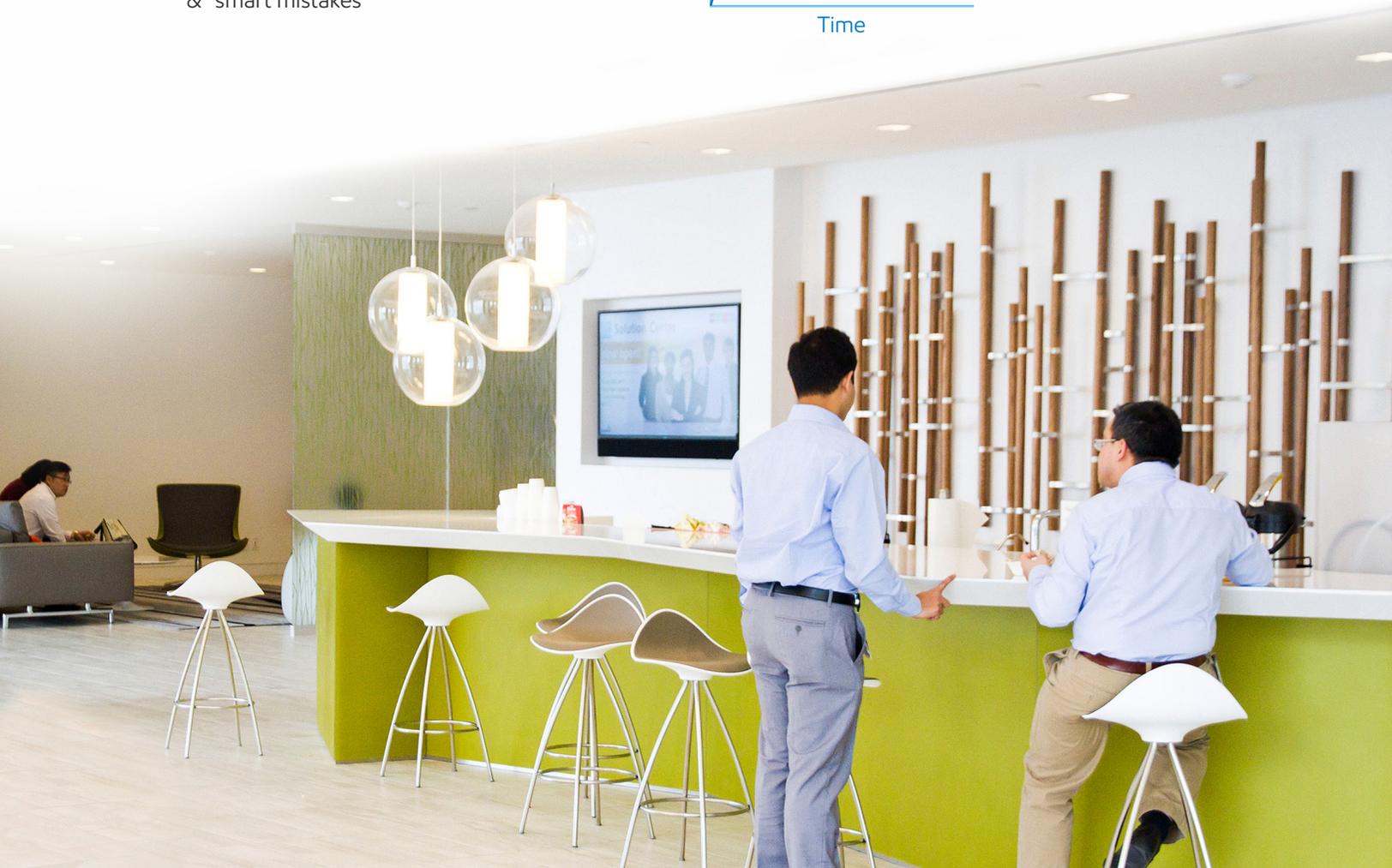
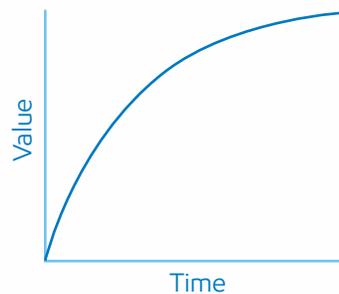
Traditional project execution

Stage-gated projects (often longer-lived)
Multiple approvals required
Value realized all at once (at end)



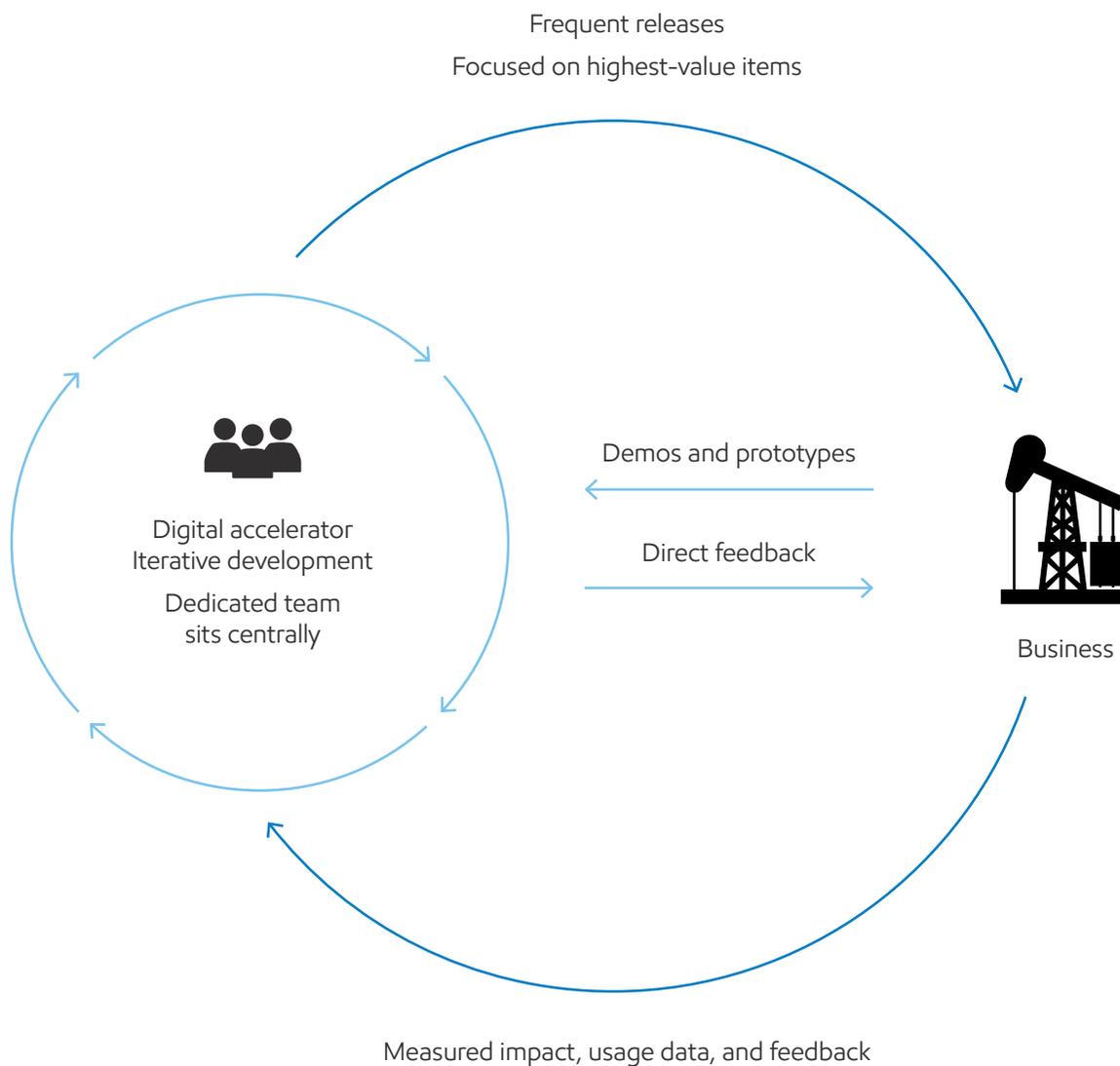
Digital + agile project execution

Shorter sprints, with iterations & feedback
Incremental value realized at intervals
Built-in authority to make decisions
& "smart mistakes"



Operating model

Iterative approach to work with the business and improve the product based on feedback



What's in it for you?

Cutting-edge projects

You'll work on highly complex, previously unsolved problems that will push your expertise and problem solving skills

Access to thought leadership

You'll work alongside seasoned experts and a talented peer group

At Imperial, you'll experience:

A thriving community

As members of the Digital Accelerator, you will have access to the scientific community, both internal and external, through conferences and seminars

Access to latest technology

You'll work on cutting-edge technology and pioneer its use in upstream

Visibility from senior leadership

You'll enjoy strong support and visibility from senior leadership, and work closely with business stakeholders to push the boundaries of digital in oil and gas

Long-term careers

Build your own unique path as you go
Move into different areas and roles as your skill sets evolve
Competitive salary and benefits

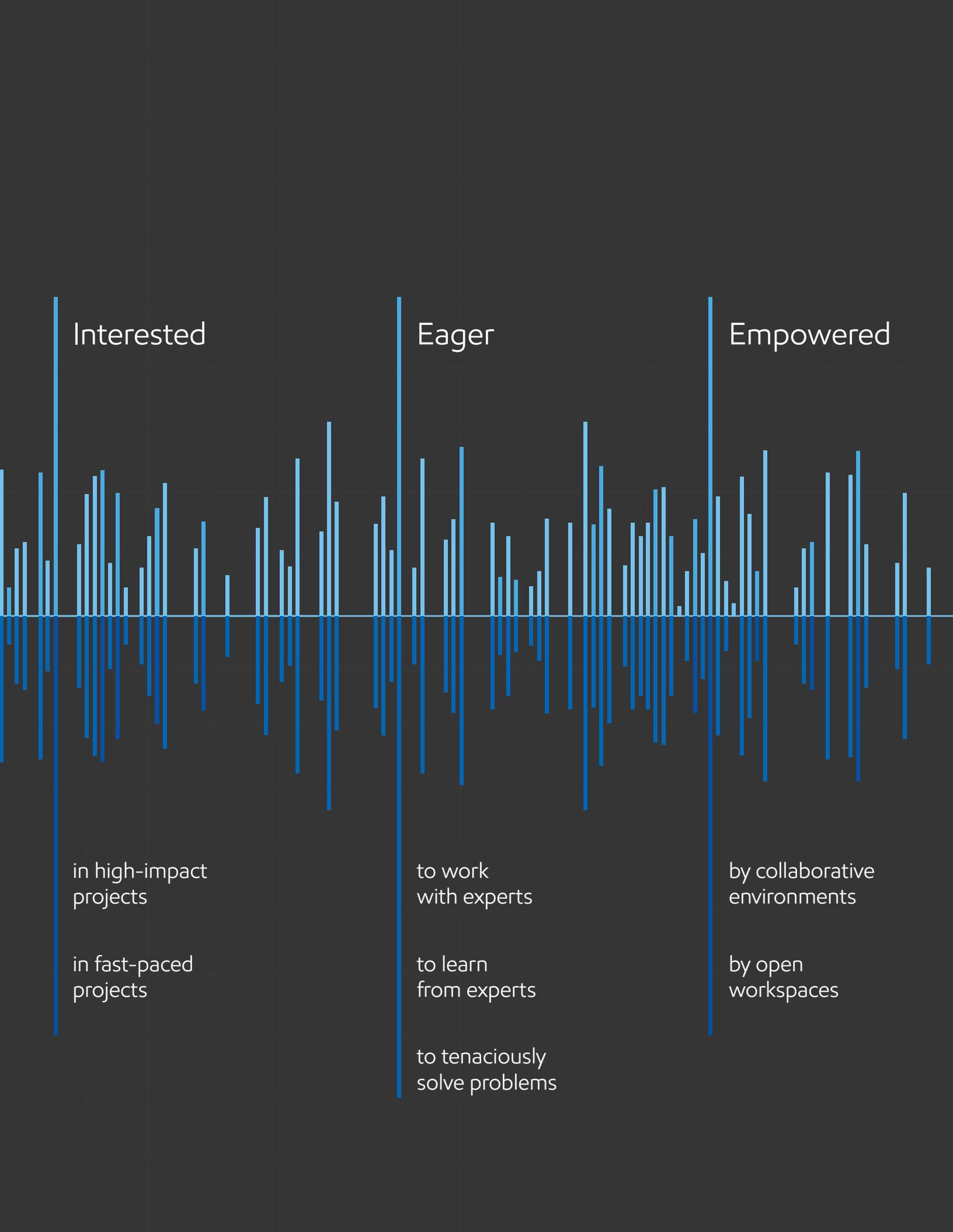
Imperial's Digital Accelerator
is looking for top-tier talent

If you are...

Passionate

about cutting-edge
analytics

about the latest
technology



Interested

in high-impact
projects

in fast-paced
projects

Eager

to work
with experts

to learn
from experts

to tenaciously
solve problems

Empowered

by collaborative
environments

by open
workspaces

As an integrated energy company, we explore for, produce, refine and market products essential to society. At Imperial, we believe that we can have reliable and affordable energy, a strong economy and a clean environment, and we're committed to making it happen.

Our technology capabilities



Access to \$1B/yr in ExxonMobil R&D investments



\$2.1B+ spent on R&D over last 20 years

Our business footprint



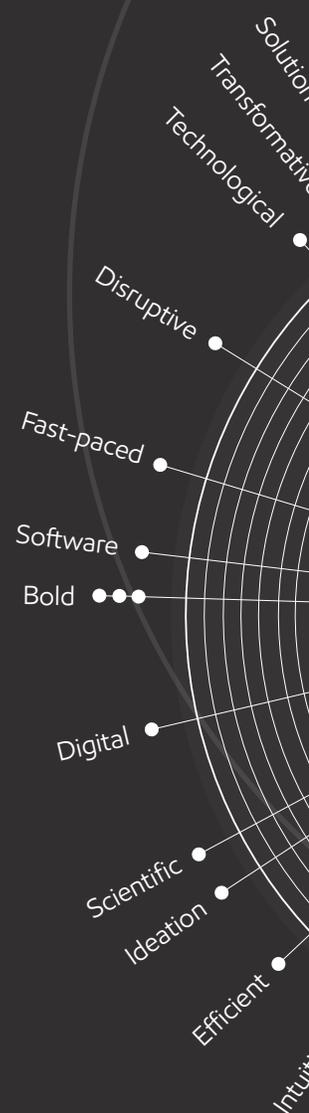
Integrated operations: production, refining and marketing



5,700 employees



Coast-to-coast portfolio across Canada



imperialoil.ca

