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Bringing plant potential to life

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CHEMICAL INDUSTRY
Awards

Six Time Award Winner

World Leader in Crop Protection

Crop Protection

Seeds & Traits

Lawn & Garden

Classification: PUBLIC

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Integrating technologies

Lawn and Garden

+

Corn
Soybean
Cereals
Diverse Field Crops
Specialty Crops
Vegetables
Sugar cane
Rice

Crop Protection
Seeds and traits
Seed care

With the broadest **portfolio** in the industry

Classification: PUBLIC

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With passionate people and a strong platform

Over
$1.4 billion
R&D investment in 2015 and
more than 5,000
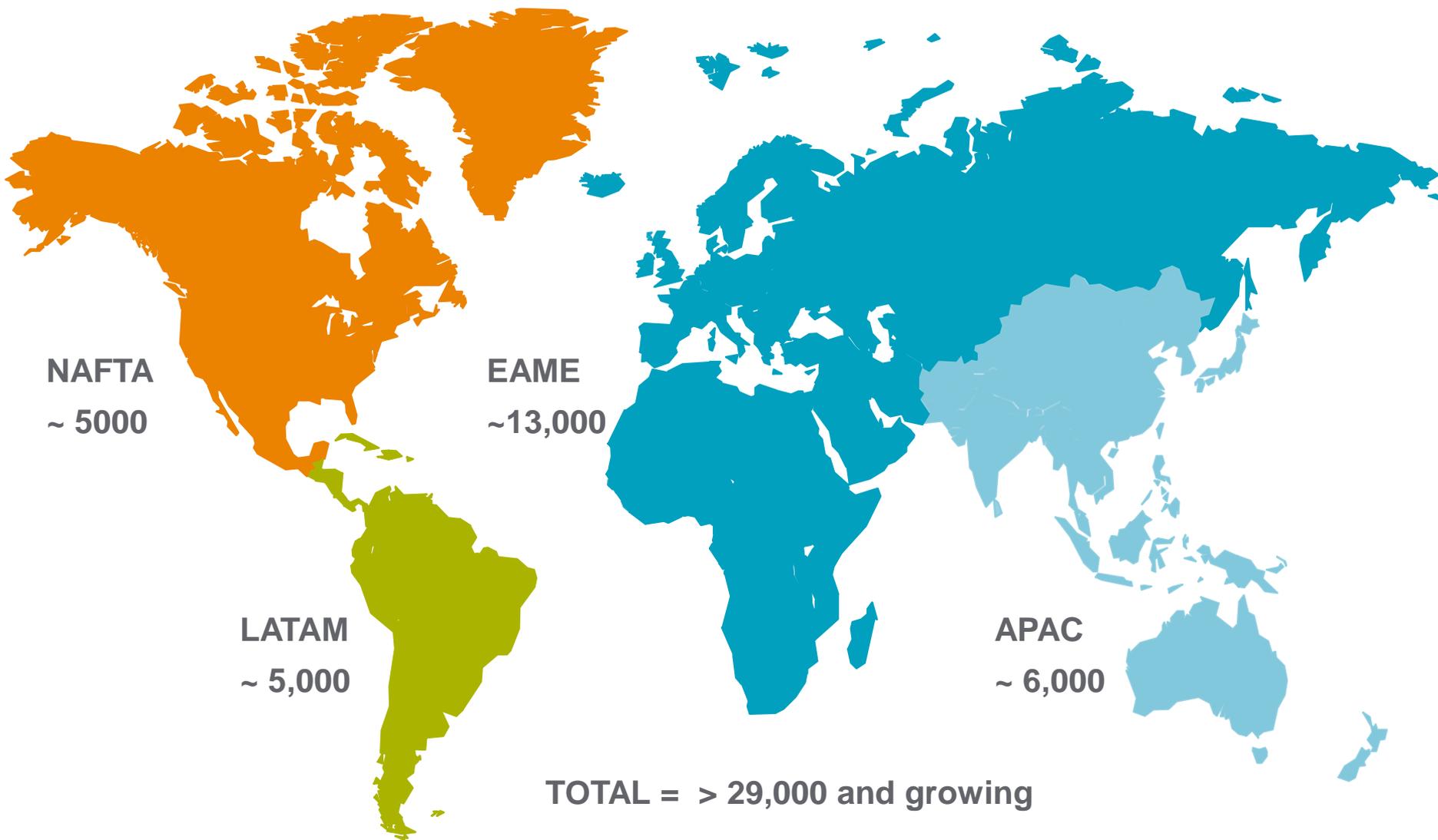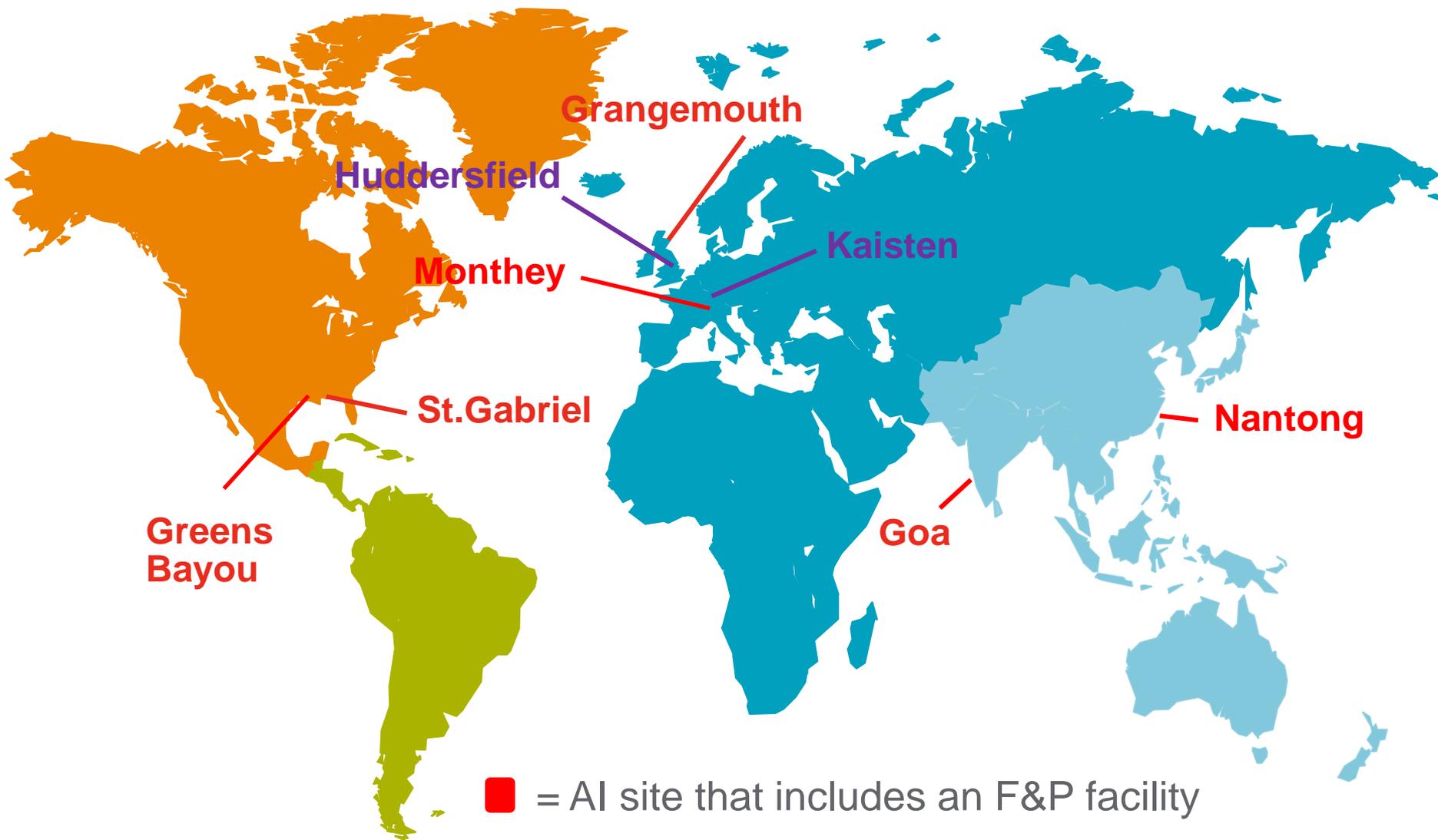R&D staff

Over
29,000
employees
in 90
countries

$13.4bn
sales in 2015

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Where our people are located

NAFTA
~ 5000

EAME
~13,000

LATAM
~ 5,000

APAC
~ 6,000

TOTAL = > 29,000 and growing

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8 Global AI Manufacturing Sites

Grangemouth

Huddersfield

Kaisten

Monthey

St.Gabriel

Nantong

Greens Bayou

Goa

■ = AI site that includes an F&P facility

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Huddersfield Manufacturing Centre

In Huddersfield, Active Ingredients (AI's) are manufactured which fight against weeds, pests and disease

- 1 of 7 AI manufacturing sites in Syngenta across the World

- ~400 people employed on site

Karate with Zeon Technology™ — **Insecticide**

GRAMOXONE — **Non-Selective Herbicide**

REGLONE® — **Desiccant (Non-Selective Herbicide)**

FUSILADE MAX MAXIMUM POWER maximum flexibility™ — **Selective Herbicide (narrow leaved weeds)**

Force®3G — **Insecticide (against corn root worm)**

Elatus™ — **Fungicide (sugar beet)**

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Food Security is a major issue for the world today

More people needing to be fed per hectare …..

**2030
>5 People**

2005
>4 People

1950
2 People
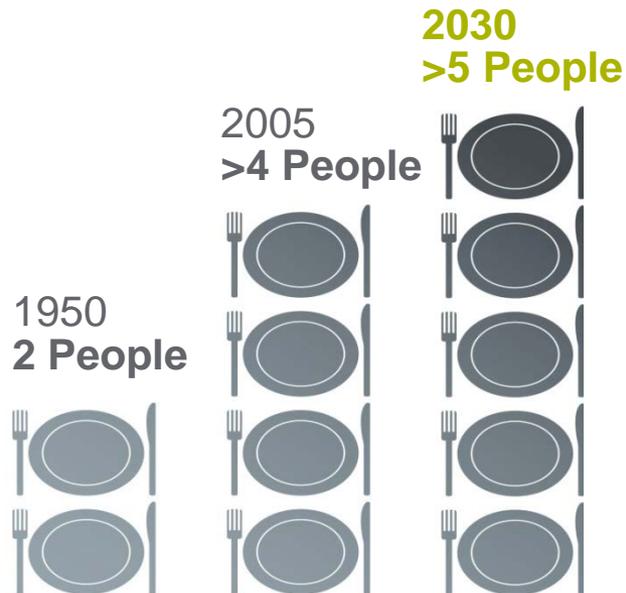
World population expected to be >9 Bn by 2050

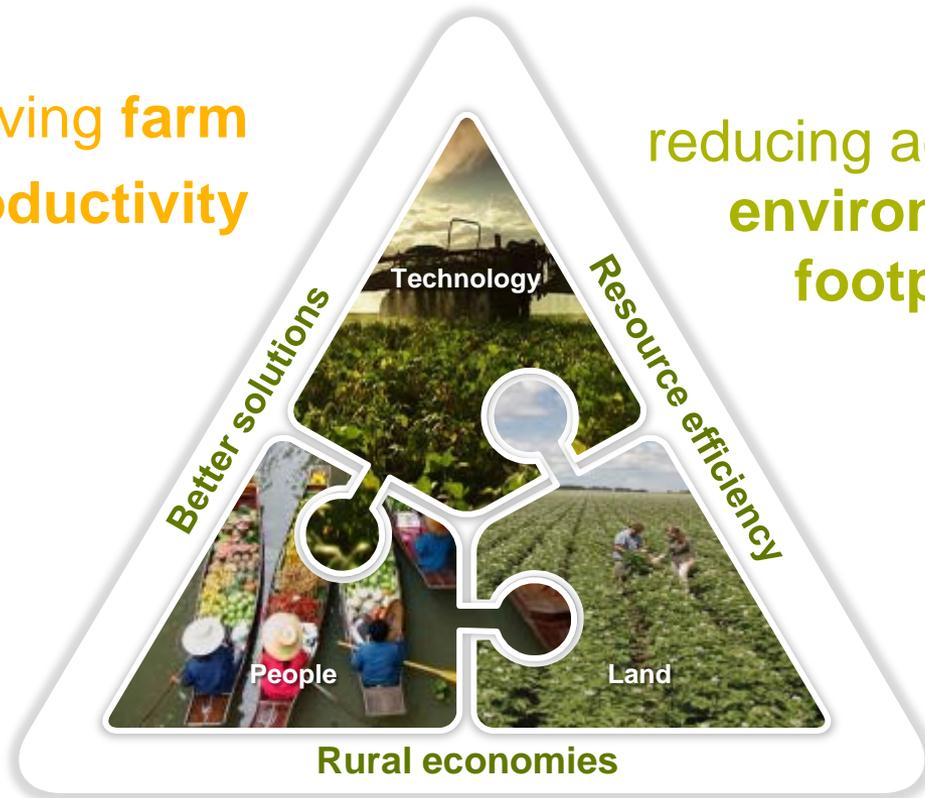**A VUCA World;**

Volatile, Uncertain, Complex, Ambiguous

- **Need more food, more animal feed**

- **Agriculture uses 70% of World's fresh water supplies**

- **Climate Change reducing available arable land**

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Our Contribution is to help Grow more from less

improving **farm productivity**

reducing agriculture's **environmental footprint**

building **rural prosperity**

Technology

Better solutions

Resource efficiency

People

Land

Rural economies

Drought

Pest infestation

Weed Attack

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The growers and the challenges they face are at the center of the Syngenta strategy

Thinking like a grower

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Science meets global challenges in farming and food

The Grower & Industry Challenge

Increasing weed resistance

Increasingly precautionary regulation

More yield from lower inputs

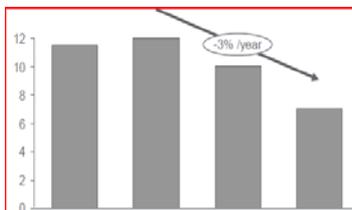**Loss of available chemistry**

Tight profit margins

Increasing reg. pressure

Difficulty finding new MOA

UNT DIM FOP DEN

Resistant Weeds
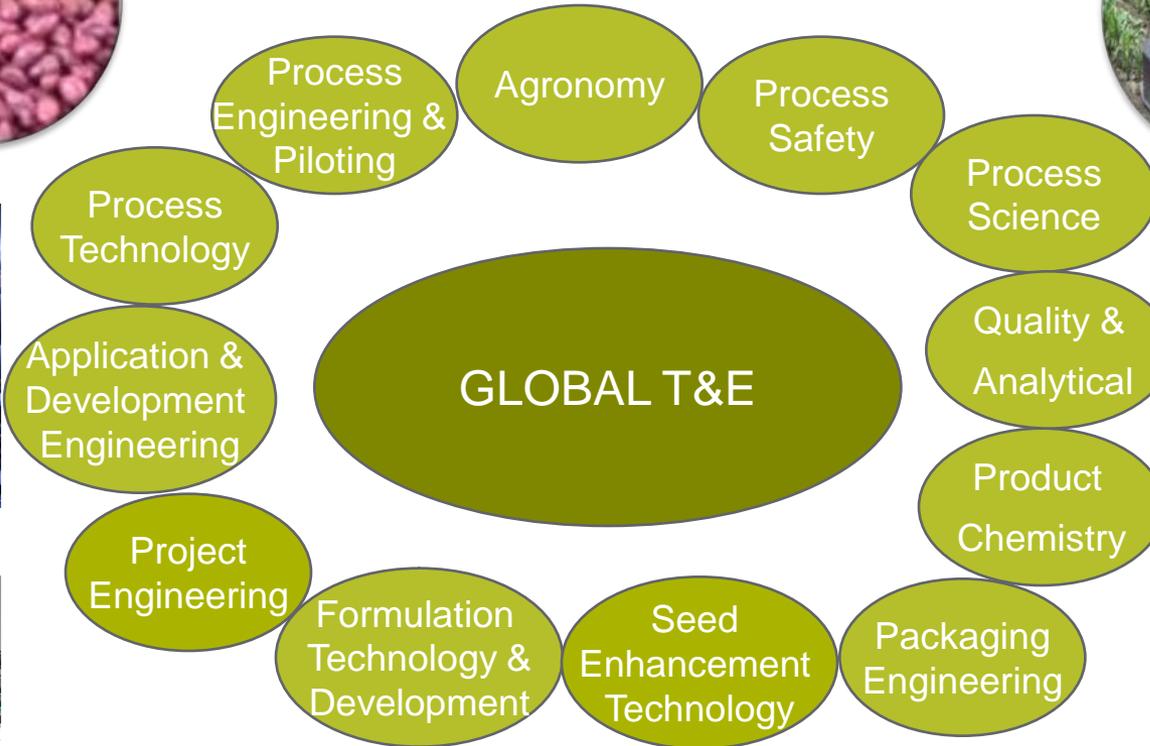
Sustainable intensification

AI invention more challenging

-3% /year

Our Technical Approaches

- Synthetic chemistry
- Physical chemistry
- Analytical chemistry
- Crystallisation/particle science
- Formulation chemistry
- Formulation and application technology
- Biochemistry
- Biology
- Biokinetics
- Agronomy
- Plant and weed science
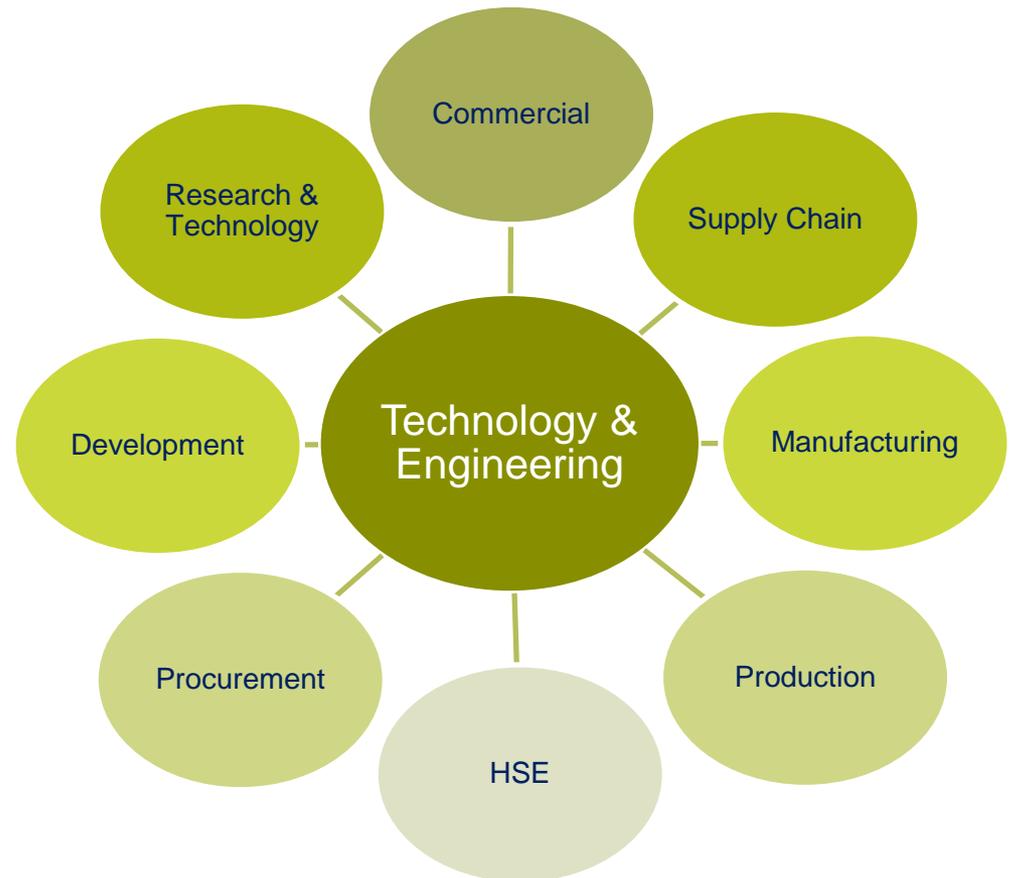- Entomology
- Product safety
- Regulatory
- Engineering

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Technology & Engineering – Global Capabilities

> 1000 staff deployed around the world

- Process Engineering & Piloting
- Agronomy
- Process Safety
- Process Science
- Process Technology
- Quality & Analytical
- Application & Development Engineering
- **GLOBAL T&E**
- Product Chemistry
- Project Engineering
- Formulation Technology & Development
- Seed Enhancement Technology
- Packaging Engineering

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Technology & Engineering - Global Function with Strong Interfaces

- Designing & implementing technologies for Crop Protection & Seeds Products
- New Product introduction (Seeds, Active Ingredients & Formulations)
- Life Cycle Technology Management
- Sourcing
- Asset Provision
- Project Engineering

Commercial · Supply Chain · Manufacturing · Production · HSE · Procurement · Development · Research & Technology · Technology & Engineering

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Areas of work in Syngenta

- Chemistry – research, process, manufacturing, analytical, formulation.

- Biology – plant science, GM, seeds, entomology.

- Agronomy

- Engineering – production, seeds processing, pilot plant, development, project management.

- Regulatory – human, environmental, animal safety, toxicology, product registrations.

- HSE – environmental, occupational, information.

- IP

- Legal

- Business and marketing – includes supply chain, procurement, sourcing, asset planning etc.

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Plants – not just the green things!

Where can Science take you in Syngenta?

- Key products are crop protection and seeds

- R&D of new products is an obvious career path for new graduates but…………..

- How about Manufacturing?

  - Produce Syngenta AI's and formulate them

  - Brings about the challenges of scale

  - Optimisation, improvement and daily pressures of production

  - Quality? Environment?

- How about Seeds Processing?

  - Seeds are natural – so how easy is it to standardise processes?

  - Seed treatments

  - Estimation of volumes and yields…

- Other areas include Formulation? Analytical?
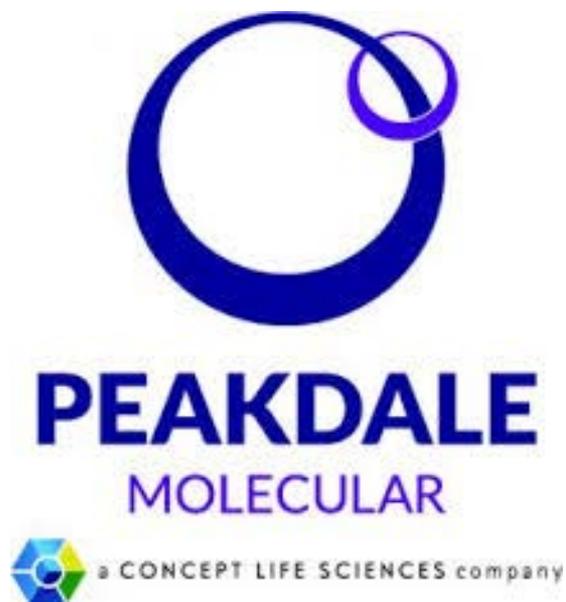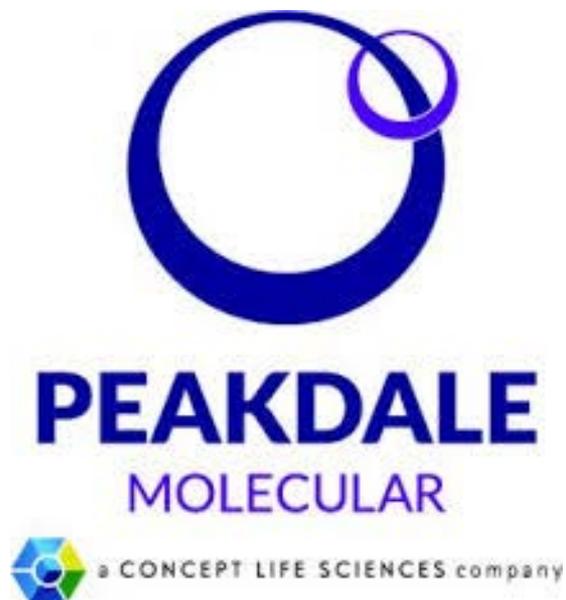
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My background - Academia

Industry?

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My background – Industry

Chemist ➡️ **Senior Chemist** ➡️ **Principal Chemist**

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My background – Industry 2

Principal Chemist ➡ **Research Leader** ➡ **???**

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My background – Industry 3

Huddersfield

Benefits of working for a large company

Access to variety of jobs internally

Chance to work abroad; international secondments

Internal networking and cross-functional working

Employee development

Job security

Benefits: the 'extra stuff'

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