

# Jobs and Skills in Scotland and Industrie 4.0

## SFC Board Meeting

March 17<sup>th</sup> 2017

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# Structure of the presentation

- Jobs and Skills in Scotland – What's happened in the Scottish labour market since the great recession?
- Looking to the future – what do the forecasts say; and potential disruptors
- Industrie and skills 4.0
- Key messages
- Implications for the Scottish Skills System

# Economic Recession to Recovery

## Recession and Recovery in Scotland

### Output

Sector	Output at recession trough v 2008		Output at Q2 2015 v 2008	
	Scotland	UK	Scotland	UK
<b>All economy</b>				
<b>Construction</b>	-22.70%	-18.90%	16.50%	-4.00%
<b>Manufacturing</b>	-16.50%	-12.50%	-7.60%	-6.40%
<b>Services</b>	-3.20%	-4.20%	3.40%	10.9
Distribution, Hotels & Catering	-5.30%	-9.40%	4.40%	9.50%
Government & other services	N/A	N/A	2.00%	6.00%
Transport, Storage & Communications	-15.20%	-9.90%	-13.20%	8.40%
Business & Financial Services	-5.50%	-4.80%	7.30%	14.20%
<i>Financial services only</i>	-15.70%	N/A	-13.70%	N/A

Source: Adapted from Fraser of Allander. March 2016

# Regional disparities

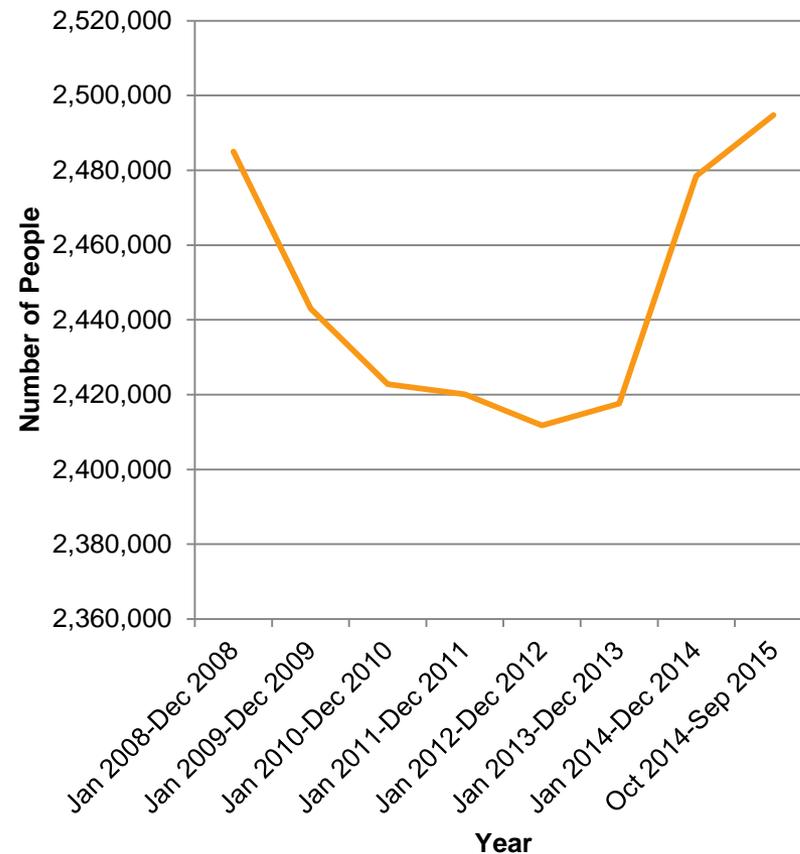
Based on an assessment of employment growth, productivity, earnings and unemployment:

<b>Weak performance and recovery</b>	<b>Moderate performance and recovery</b>	<b>Strong performance and recovery</b>
Borders Dumfries and Galloway Ayrshire Tayside Highlands and Islands	West Lothian Lanarkshire West Region Forth Valley	Glasgow, Aberdeen City and Shire Edinburgh and Lothians Fife

# Jobs in Scotland

- Total employment in Scotland continued to fall until 2012, but has risen sharply since
- Total employment now 0.4% greater than 2008 peak (v 3.4% UK)
- And dominated by private sector 7.1% growth v -6.9% in public sector

Number of People Employed in Scotland 2008 – 2015



Source: ONS, Annual Population Survey

# The productivity challenge

## Productivity in Scotland

- UK trails G7 advanced economies on productivity by 18 percentage points and Scotland trails UK.
- UK v US: UK trails productivity across all sectors, especially manufacturing.
- UK v Europe
  - manufacturing productivity in line with France/ Germany.
  - significant deterioration versus Europe in financial services and private service sector.
- Productivity improvements have been muted at a Scottish level over the last six years
- Fraser of Allander Institute argue that total factor productivity in Scotland is much lower than UK
- Recent reported 'growth' in productivity down to reduction in contracted hours / hours worked

# Low Pay/In Work Poverty

- Low pay particular challenge for some groups – women, younger people, older workers, those with no qualifications, some ethnic groups, lone parents, people with disabilities
- In 2013/14, 430,000 people living in relative poverty were living in a household with at least one person working (58% of those in poverty)

## Number of People in Poverty in Scotland living in Working Households

Year	All People in In-Work Poverty (After Housing Costs)
2008/09	450,000
2009/10	440,000
2010/11	430,000
2011/12	380,000
2012/13	510,000
2013/14	430,000

Source: Scottish Government, from DWP

# The rise of non standard work

## The Rise of Non-Standard Work

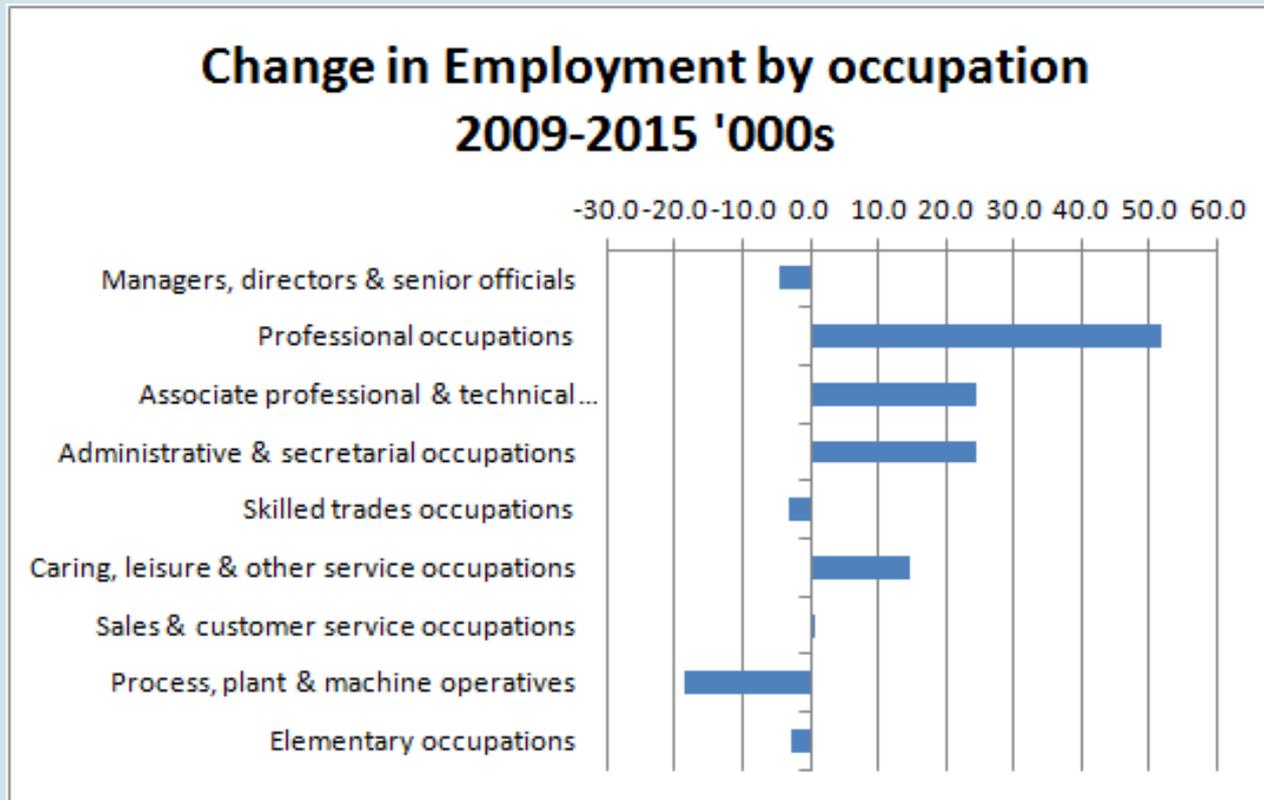
*Employment change in Scotland and the UK, 2008 – 2015*

Sector	Scotland			UK		
	2008 (,000)	2015 (,000)	Change	2008 (,000)	2015 (,000)	Change %
Full time employment	1,858	1,867	+0.5%	21,206	22,133	+4.3%
Part time employment	647	696	+7.5%	7,098	7,589	+6.5%
Self employment	265	301	+13.6%	3,804	4,568	+20%
Temporary employment	126 (2011)	139	+10.3%	1,139 (2011)	1,618	+42%

Source: Labour Force Survey

# Hour glass labour market?

## Occupational Shifts



Source: 2011 Census, Labour Force Survey, Oxford Economics

# Skills Challenges

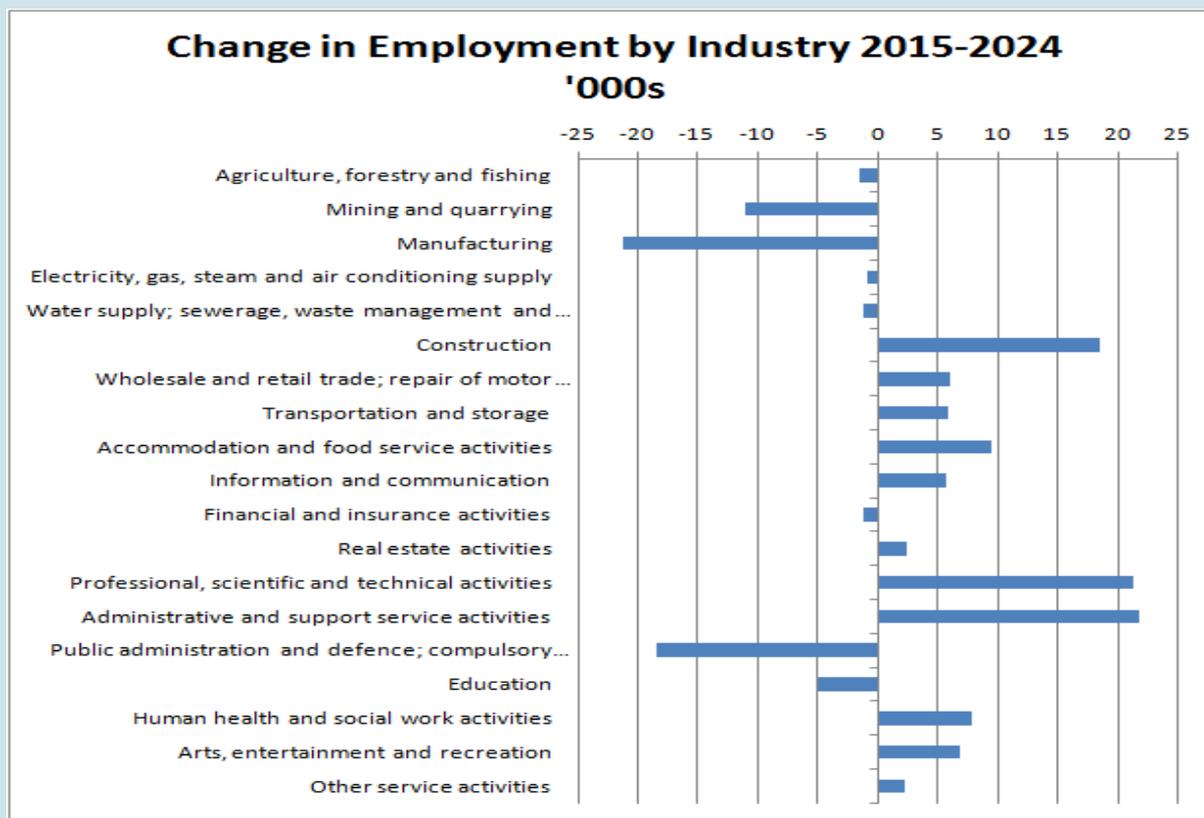
## Current Skills Challenges in Scotland (From Employer Skills Survey 2015)

- Steep rise in vacancies from 54,000 (2013) to 74,000 (2015) – reflecting higher demand for labour
- Proportion of establishments reporting Skills Shortage Vacancies in Scotland rose from 3% (2011) to 4% (2013) and 6% (2015) – in line with UK trends
- Proportion of establishments reporting skills gaps fell to 14% (2015) – same as at UK level
- Increasing levels of **under-employment and under-utilisation of skills** – 32% of establishments reported at least one member of staff with both skills and qualifications above the level required for the job
- Skills shortages and recruitment difficulties are likely to be a permanent feature of the Scottish labour market, particularly where experienced labour is required
- Along with under-employment and under-utilisation of skills, this will make improving productivity a challenging task

# The Future – Employment by Industry

- Growth of c 26,500 jobs 2015 – 2024 (down significantly from pre BREXIT forecast)
- Continuation of stronger growth for women, and in part time work

## Looking Forward - Employment



# The Future – Total Jobs Requirement

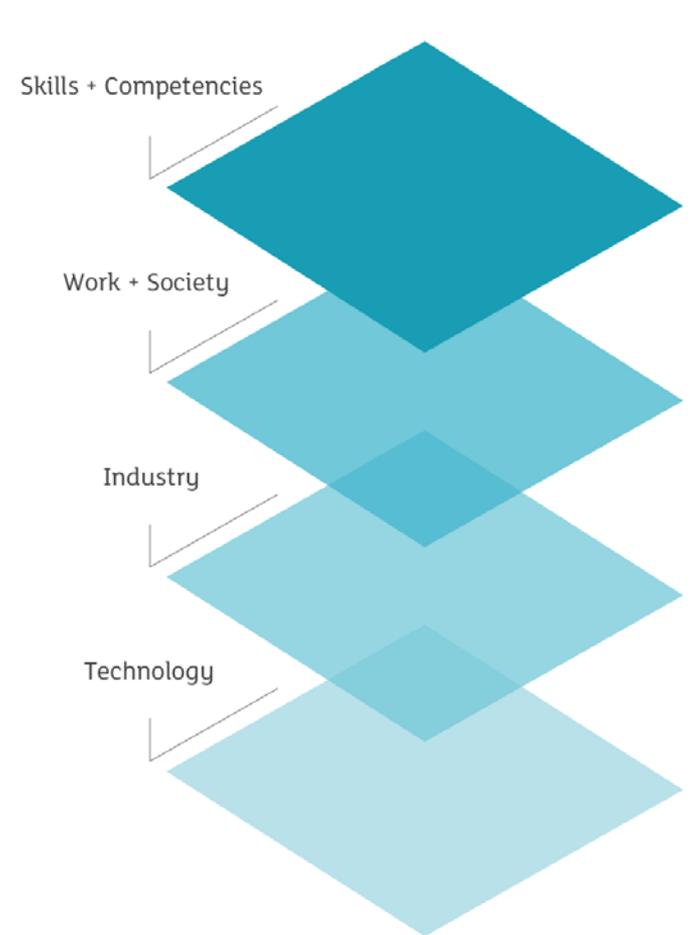
## Looking Forward – Total Jobs requirement

Total jobs requirement from 2016-2024

Occupation	Expansion demand	Replacement demand	Total jobs requirement
Managers, directors & senior officials	1,700	51,600	53,300
Professional occs	8,500	229,400	237,900
Assoc professional & technical occs	1,200	80,900	82,100
Admin & secretarial occs	-3,900	96,000	92,100
Skilled trades occs	4,700	87,600	92,300
Caring, leisure & other service occs	7,400	83,800	91,200
Sales & customer service occs	2,500	106,500	109,000
Process, plant & machine operatives	-1,700	43,300	41,600
Elementary occs	6,100	175,000	181,100
<b>Total</b>	<b>26,500</b>	<b>954,100</b>	<b>980,600</b>

# Industrie and Skills 4.0

- ◆ Technology is the accelerant of change
- ◆ Rate of change is exponential
- ◆ New skill-set required to navigate constant state of flux



# The future of work



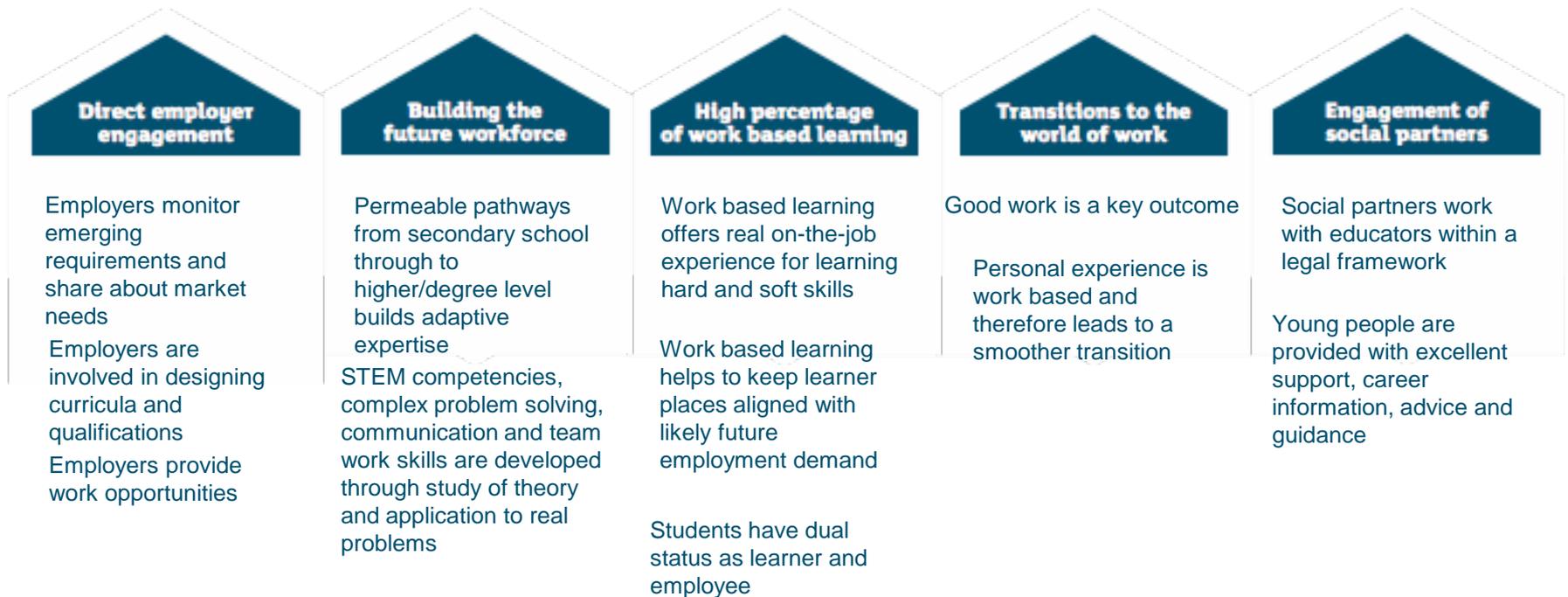
- **Convergence of products and services**
- **Project based work**
- **Collaborative work**
- **Flat organisational structures**
- **Global labour market**
- **Changing workforce demographics**

# Skills for the future

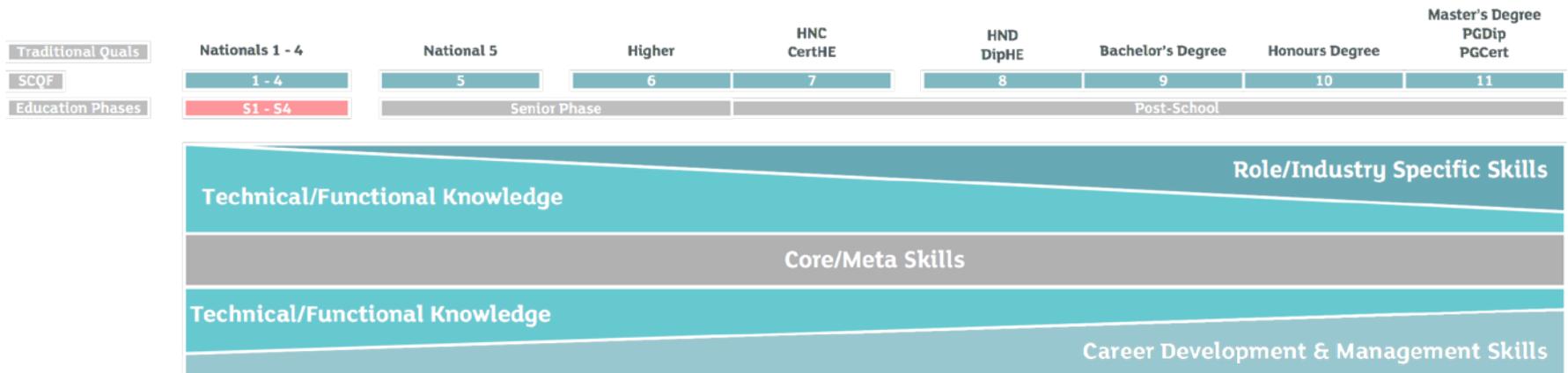


- **Resilience**
- **Entrepreneurialism**
- **Problem solving**
- **Social skills**
- **Creativity**
- **Manipulating technology**
- **Managing complexity**

# What can we learn from the key attributes of top OECD countries?



# Skill development across the work based learning pathway:



**Core/Meta Skills**

Enable individuals to thrive, cope with change, and to work effectively with others, and with digital tools and environments

**Technical/Functional Knowledge**

Development and reflection of knowledge, and skills, to the level required by the individual to perform their job

**Career Development & Management Skills**

Enables individuals to develop higher level career management skills and develop professionally

**Role/Industry Specific Skills**

Acquisition and development of skills that are required for individuals to do their job and progress in their careers, within their chosen industry

# Key Messages

## Key Economic and Labour Market Dynamics

- Scottish economy expecting modest growth – but significant change?
  - Increased demand for higher level skills, increased digital capabilities, leadership and management
  - Estimates that on average 1/3 of the skill sets required to perform today's jobs will be wholly new by 2020
  - But care, customer service and skilled trades will still = 30% of all job openings
- In work progression and productivity – an increased focus on the workplace?
- Inclusive growth – where growth takes place matters – as does who benefits / participates
- Changing demographics – and different levels (and patterns) of in-migration ?
- Impact of automation and digital disruption on skills demand – the future will be different...

# Key Skills Implications

## Responses to economic and labour market challenges

- Flexibility and responsiveness to the economy – Robust and timely labour market intelligence and insight
- Developing a system that is employer and demand led - increasing work based learning?
- An increased focus on in work training and in work progression v labour market entry?
- What's our collective contribution to supporting inclusive growth?
- Strengthening digital capabilities – encouraging learners to exploit and innovate with technology, equipping them to become agents of change?
- Equipping individuals with the meta skills to thrive in changing circumstances?