



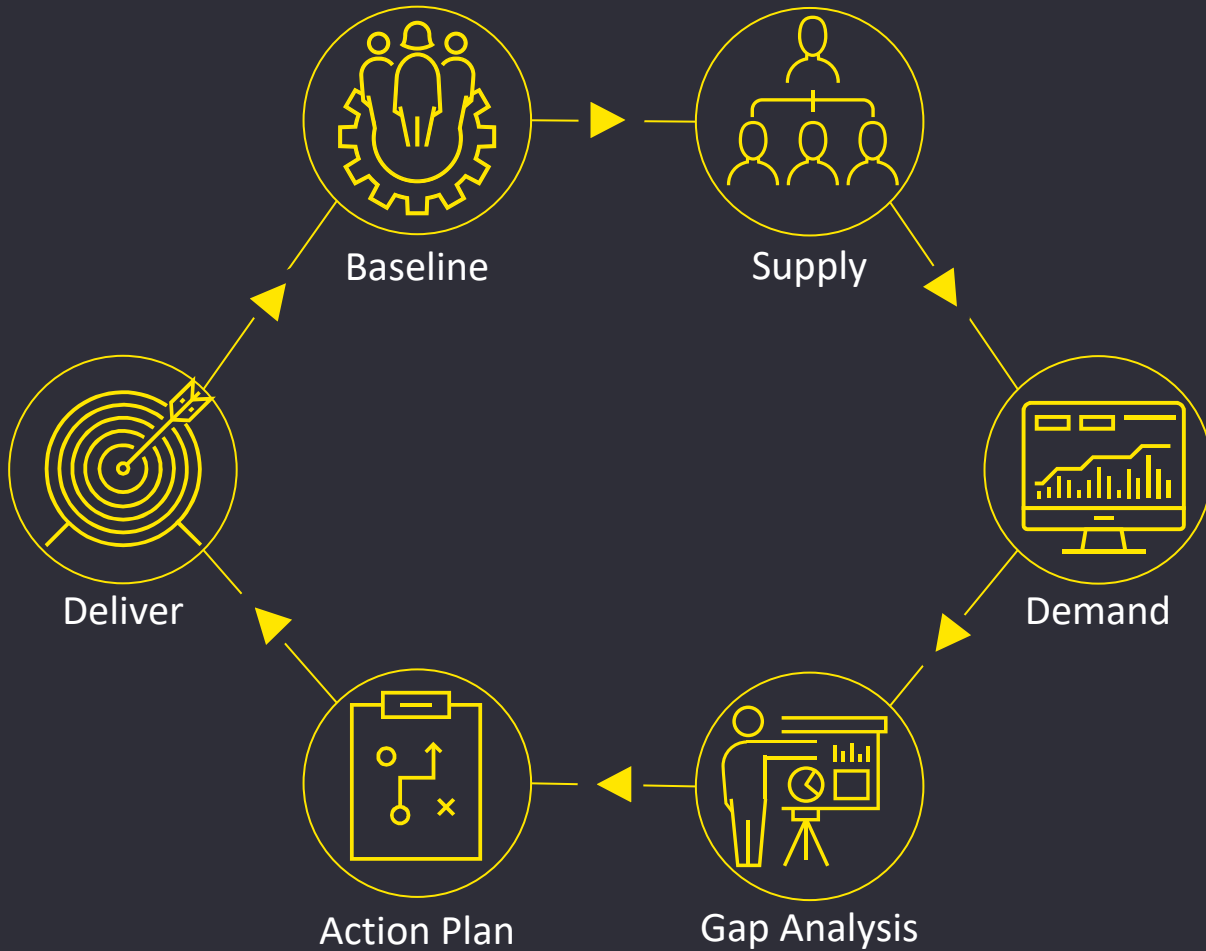
Moving from Capacity to Capability

The EY logo consists of the letters 'EY' in a bold, white, sans-serif font. A yellow triangle is positioned above the 'Y', pointing downwards towards the letters.

Building a better
working world

Seven Rights constitute the Right Workforce

The **Right Capability** is at the core



Components of Capability

Skills

- ▶ What we have practiced and can do

Knowledge

- ▶ What we have learnt and is readily available in our mind

Mindset

- ▶ How we think, feel and react to stimuli

Physiology

- ▶ How we use components
- ▶ Physical ability and appearance
- ▶ Health and wellbeing

Accreditation

- ▶ 'Proof' of a component or statutory requirement

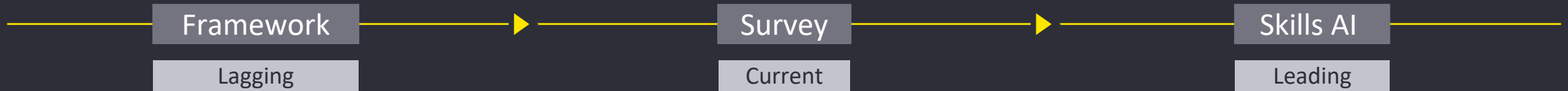
Environment

- ▶ The present factors when and where other components are applied

How do we measure Capability?



How do we measure Capability?



Competency Frameworks are top-down assessments of the expected level of individual competence

- ▶ More aspirational than realistic
- ▶ Tended to be behavioural, rather than specific on skills
- ▶ Useful guiderail for recruitment and performance review processes
- ▶ Typically inconsistent and quickly outdated

Skills Surveys came to prominence with the rise of LinkedIn and capture input from individuals, typically with a profile page

- ▶ Enabled far greater accuracy of skills analysis
- ▶ Organisations struggled to drive adoption as workers did not see the value of input
- ▶ Collecting meaningful data was slow and quickly outdated
- ▶ New technology has revitalised this approach

Skills AI utilises big data approaches to parse opensource job listings and CVs to determine the supply and demand for skills in the labour-market

- ▶ Short timeframe from execution to insight
- ▶ An 80% solution requires supplement of business-specific nuance
- ▶ Can be used for **Supply** and **Demand**

Supercharging the Survey

Natural Language Processing

Specified

Technologies: Python, Tensorflow, Tensorboard, GCP.

- ▶ Python
- ▶ Tensorflow
- ▶ Tensorboard
- ▶ GCP

Inferred

Developed a POC to procure the rating and review data across omni channels and collating it with previous product demand for inventory forecasting across stores. Used collaborative filtering to determine the top products for each store and then building a model to forecast inventory for each product. Provide supervision and mentorship to the team members foster a healthy, stimulating work environment that frequently harnesses teamwork.

- ▶ Team Leadership

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EDUCATION

Liverpool John Moores University Master of Science in Machine Learning and Artificial Intelligence 2018-Present	Liverpool, England 2018-Present
International Institute of Information Technology Ph.D. Systems in Machine Learning and Artificial Intelligence 2014-2018	Bangalore, Karnataka 2014-2018
Guru Nanak Dev University Bachelor's in Technology (Electronics and Communication Engineering) 2009-2014	Amritsar, Punjab 2009-2014
R.A.Y. Public School Senior School Examination 2009-2010	C.G.P.A.: 9.05/10 Amritsar, Punjab 2009-2010
R.A.Y. Public School Secondary School Examination 2009-2010	Percentage: 87.8 Amritsar, Punjab 2009-2010

INDEPENDENT COURSEWORK

- Big Data Specialization (October 2015 - February 2016) - Coursera (UC, San Diego)
- Introduction to python for data science(March 2016) - edX(Massachusetts)
- Basic Statistics - University Of Assiut(Assiut, Egypt)
- Introduction To Data Analytics - University Of Austin Texas, (Edx)

RELATED EXPERIENCE

Publicis Sapient Senior Software Engineer - Engineering • Client: Sapient B&B	Gurgaon, Haryana Feb, 2019 - Present
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• Developed an Abstractive Summarization solution by using Recurrent Capsule Networks. This achieved better results with less amount of data as compared to LSTM based Encoder Decoder model. Responsible for Root Cause Analysis, Evaluation/Introduction of new technologies & products.

Technologies: Python, Tensorflow, Tensorboard, GCP, NLP, GloVe, Bbox scores, Bag-of-N-grams

Chibhalgic Senior Software Engineer - Engineering • Client: Fortune 500 Retailer Of USA	Noida, UP July, 2017 - Feb, 2019
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• Developed a POC to procure the rating and review data across omni channels and collating it with previous product demand for inventory forecasting across stores. Used collaborative filtering to determine the top products for each store and then building a model to forecast inventory for each product. Provide supervision and mentorship to the team members foster a healthy, stimulating work environment that frequently harnesses teamwork.

Assessment & Realtime Capture

Current Level	Emerging Skill	Declining Skill	Maintaining Skill	Internal Skill
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Agile Methodology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Budgeting Analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Business Analytics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Continuous Improvement Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Continuous Integration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sources: EY SpotMentor



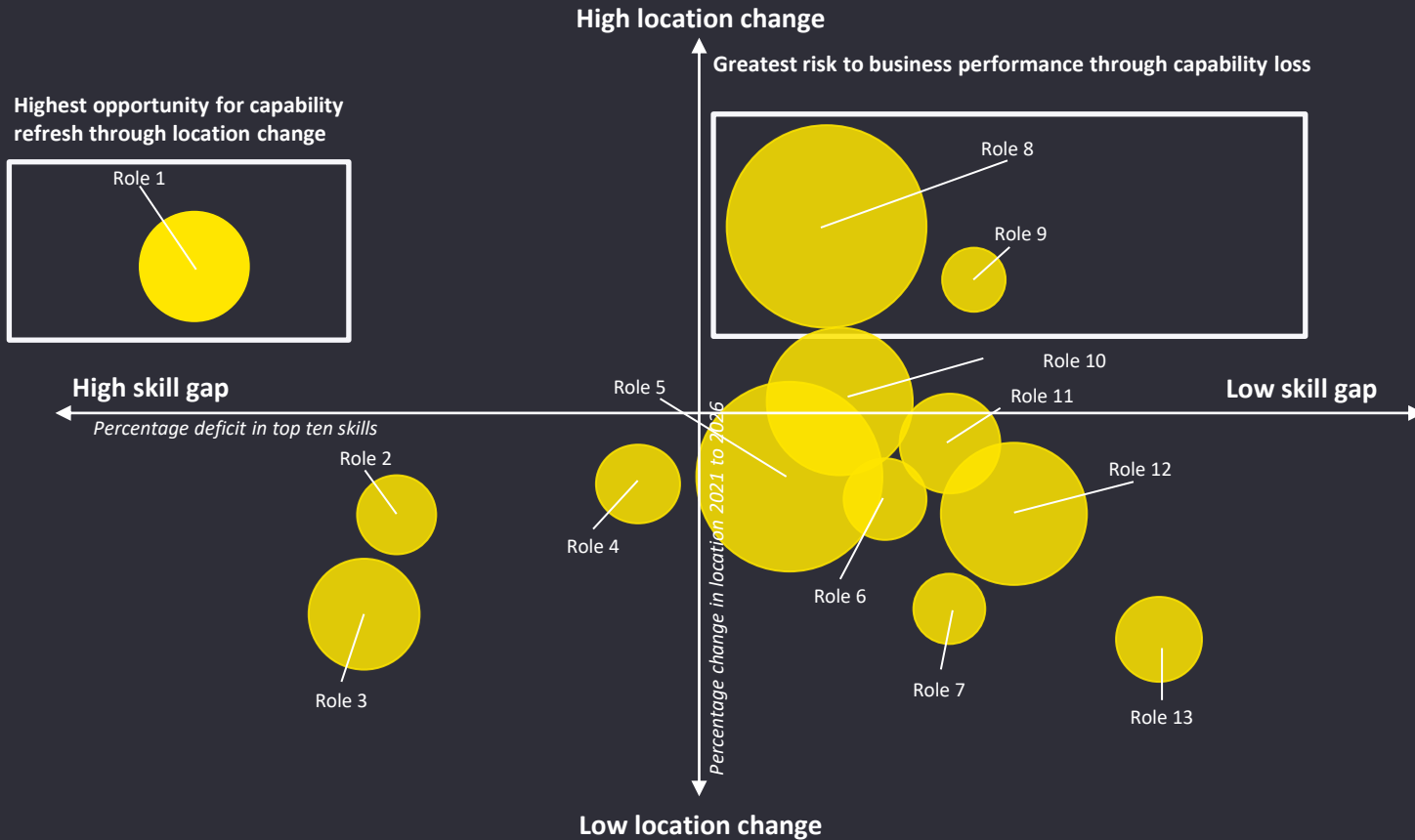
How do we plan with Capability?



Capability impact of business relocation

Capability analysis pinpoints the risks and opportunities of business relocation

Level of Planned Business Relocation vs Current Skills Gap



Client closing a number of sites and consolidating locations to reduce costs

- ▶ Analysing the gap between current state of capability and the Success Profile
- ▶ Overlaying the level of proposed location change

Provides a clear indication of:

- ▶ Opportunity to bridge existing skills gap through relocation
- ▶ Risk of impact to business performance through capability loss

Capability impact of junior hiring

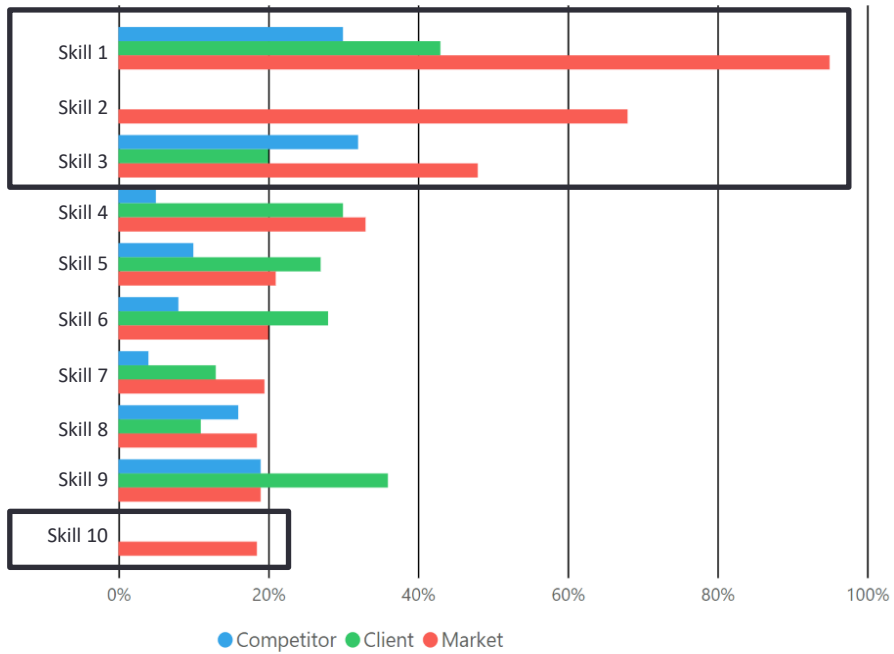
Capability analysis highlights benefits of a more **blended hiring** approach

Client hires low-skilled workers and upskills them to avoid costs of employing experienced staff

- ▶ We can see the extent of the capability gap on hiring
- ▶ We can see that the client's competitors are using a similar approach

- Provides a clear indication of:
- ▶ Surplus of experienced staff in labour market
 - ▶ Opportunity to hire experienced staff without excessive increase in costs

Top 10 Skills for Role 8



Change in Market Demand for Roles

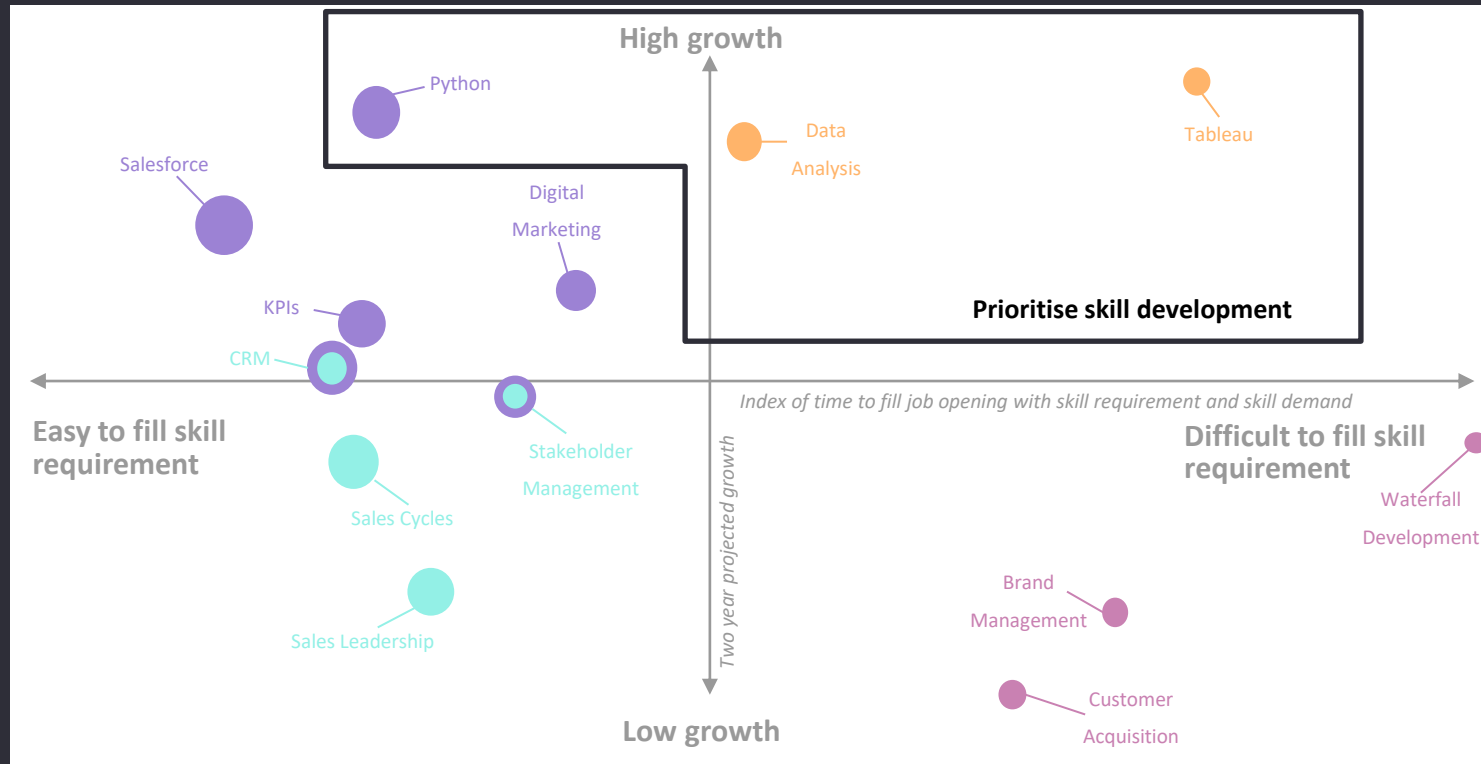


Sources: Client Example

Capability impact of skill development

Capability analysis pinpoints the skills to **build** rather than **buy** or **borrow**

Change in Market Demand for Skills



Key: ● Escalators ● Disruptors ● Stabilisers ● Challengers

Client is struggling to hire people with the right skills in the labour market. What is the best approach to solve the problem?

Capability analysis shows:

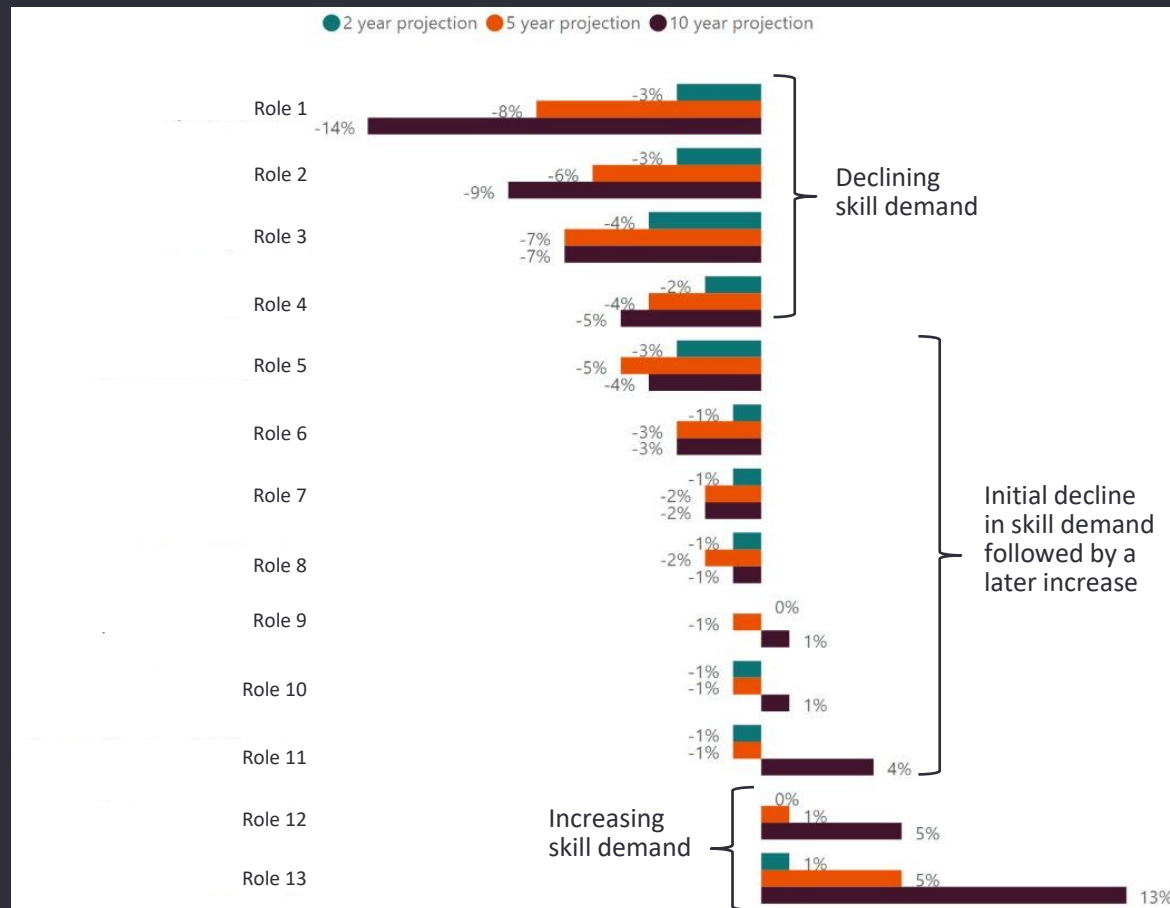
- ▶ The relative size of the baseline demand for these skills
- ▶ The growth in demand for specific skills in the marketplace
- ▶ How long these vacancies are open, indicating ease of filling
- ▶ This allows us to make a clear recommendation on the skills to build rather than try and secure from the wider labour market

Sources: Client Example

Capability impact over time

Capability analysis highlights which roles will have a **material change** in the future capability

Average skills growth by job role



Client wants to know if it needs to invest the effort in a detailed capability focus on all roles

- ▶ Roles with **increasing skill demand** should be prioritised for retention and recruitment
- ▶ **Initial decline followed by an increase in skill growth.** These skills profile for these roles will need to be reviewed more frequently over time
- ▶ Roles with **declining skill demand** could be combined, reduced or evolved depending on change in type of tasks needed

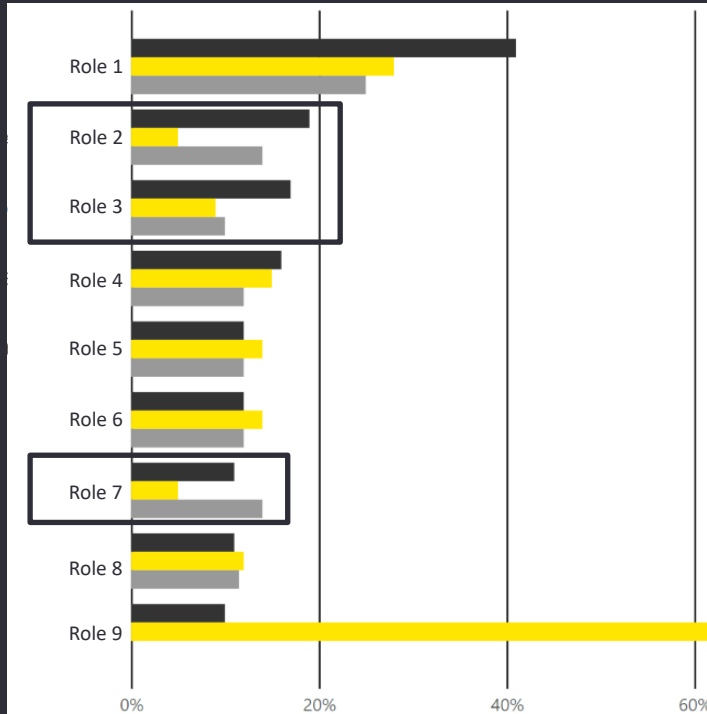
Sources: Client Example

Capability impact of recruitment selection approach

Capability analysis flags the deficits that will have a **disproportionate impact** on business performance

Comparison of Client and Competitors to Success Profile

Creativity skills



Problem solving skills



■ Success Profile ■ Client ■ Competitors

Client's new growth strategy hinges on capabilities in high demand for Industry 4.0

- ▶ Analysed the gap between current state of capability and the future requirement
- ▶ Flags the specific roles where there is insufficient emphasis on vital **creativity** and **problem solving** skills in job adverts
- ▶ Highlights the competitive advantage to be gained by closing these gaps
- ▶ Enabled action to change the recruitment process to ensure new hires had future-proof capability

Sources: Client Example



Capability impact of redeployment

Capability analysis highlights the opportunity to **bounce** and the necessity to **build**

Key:

- Low adjacency
- Med. adjacency
- High adjacency

	Role 1	Role 2	Role 3	Role 4	Role 5	Role 6	Role 7	Role 8	Role 9	Role 10	Role 11	Role 12	Role 13
Role 1		14%	48%	29%	28%	36%	36%	71%	61%	66%	45%	31%	71%
Role 2	14%		33%	24%	20%	25%	38%	12%	12%	11%	6%	23%	21%
Role 3	48%	33%		52%	51%	59%	72%	41%	30%	38%	26%	74%	55%
Role 4	29%	24%	52%		34%	38%	51%	24%	21%	23%	17%	38%	38%
Role 5	28%	20%	51%	34%		40%	45%	23%	15%	19%	13%	36%	34%
Role 6	36%	25%	59%	38%	40%		53%	33%	24%	32%	37%	47%	44%
Role 7	36%	38%	72%	51%	45%	53%		30%	26%	29%	19%	55%	48%
Role 8	71%	12%	41%	24%	23%	33%	30%		70%	76%	56%	26%	73%
Role 9	61%	12%	30%	21%	15%	24%	26%	70%		66%	46%	19%	63%
Role 10	66%	11%	38%	23%	19%	32%	29%	76%	66%		65%	25%	77%
Role 11	45%	6%	26%	17%	13%	37%	19%	56%	46%	65%		18%	56%
Role 12	31%	23%	74%	38%	36%	47%	55%	26%	19%	25%	18%		38%
Role 13	71%	21%	55%	38%	34%	44%	48%	73%	63%	77%	56%	38%	

Client has capabilities they no longer need. What is the best approach to avoid lay offs?

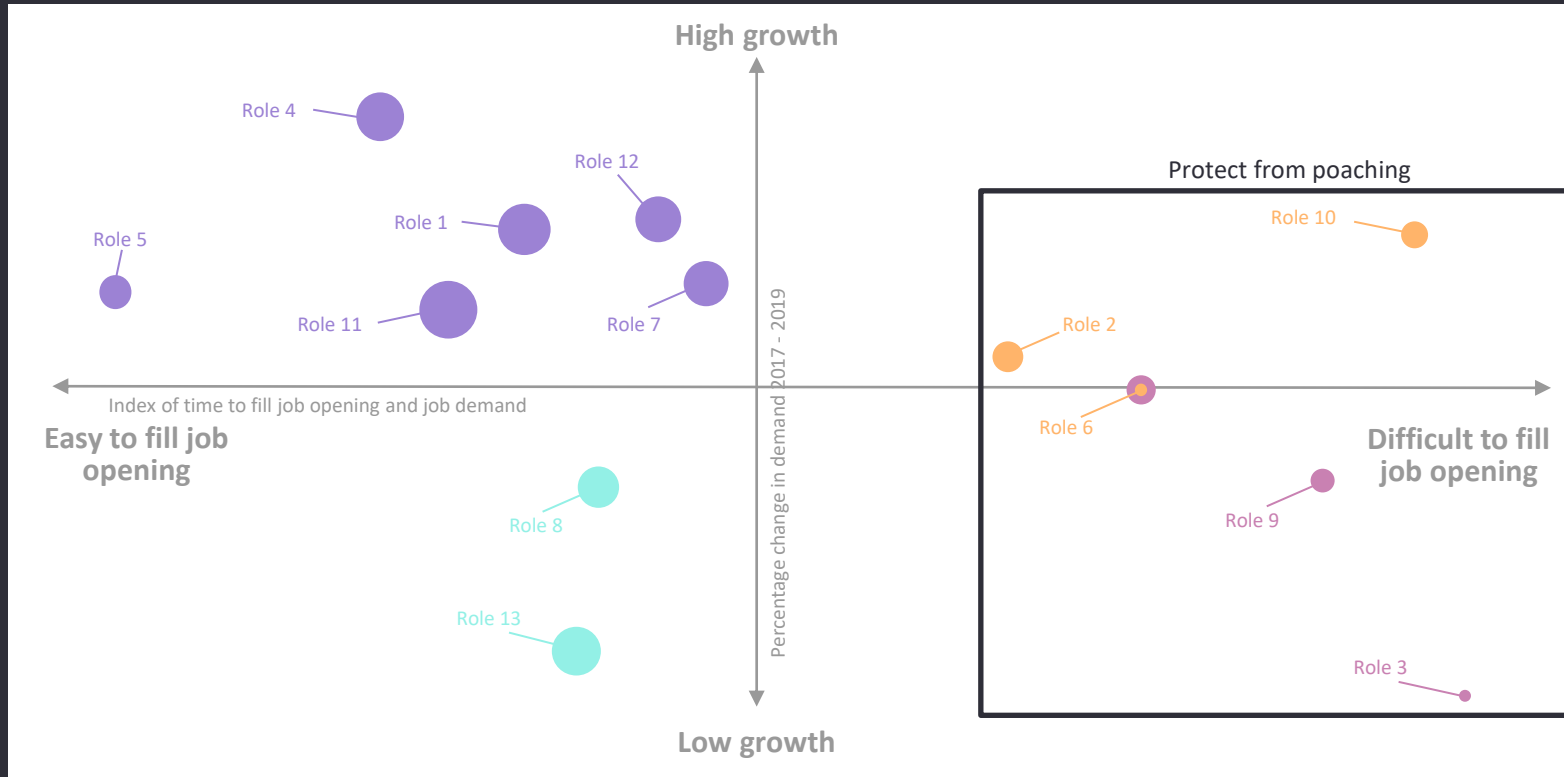
- ▶ Capability analysis shows the adjacency of roles
- ▶ We can see the gap between specific capabilities (eg project management) between roles
- ▶ This allows us to make a clear recommendation on where we can move people between roles
- ▶ We can pinpoint the exact capabilities that are mismatched and the level of upskilling required

Sources: Client Example



Capability impact of poaching

Capability analysis pinpoints the specific roles to **bind**



Key: ● Escalators ● Disruptors ● Stabilisers ● Challengers

Client is struggling to retain people. What is the best approach to solve the problem?

Capability analysis shows:

- ▶ The relative size of the baseline demand for these roles
- ▶ The growth in demand for specific roles in the marketplace
- ▶ How long these vacancies are open, indicating ease of filling
- ▶ This allows us to make a clear recommendation on the roles that need to be protected from poaching
- ▶ Provides clarity on a buoyant labour market, where attrition is less of a risk

Sources: Client Example

Key Takeaways



Key Takeaways

- ▶ **Capability is at the core of strategic workforce planning**
- ▶ **Using a capability lens allows us to hone in on solutions to broader problems**
- ▶ **Multivariate analysis of capability and a range of data provides a wealth of different insights**
- ▶ **Technology is an enabler, not a silver-bullet**
- ▶ **No single technology can do everything, we need a blend of tools**
- ▶ **Work out what problem we're trying to solve before we look at technology solutions**

Thank You



EY | Building a better working world

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