2025 RESOURCE MANAGEMENT GLOBAL SYMPOSIUM

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Evaluating Skill Criticalness and its Impact on Capacity Planning

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Experience

Amy Little is the resource management lead for Indelible Solutions. She is an experienced resource manager, who has worked at small start-ups, mid-size consulting firms, and large organizations.

Approach

Amy is a very data-driven individual and takes a bottom-up approach to resource management. She firmly believes that employee development and employee preference is a critical factor in organizational success and scalability.

Education

Amy has her BA in history from the University of Illinois at Springfield, and her MA in history from DePaul University.

Agenda

1 Current Resourcing Practices

2 Skill Criticalness

3 Skill Criticalness Requirements

4 Capacity Planning

5 Two Methods & Examples

6 Proactive Capacity Planning

7 Summary & Recap

8 Strategic Planning

9 Outcomes & Conclusion

Resource Management

The main purpose of resource management is to get the "right person, in the right place, at the right time."

State of Resource Management

Challenges

In 2024 "employers faced hiring challenges due to a scarcity of qualified candidates, with job openings surpassing available job seekers. The implications are the need for "targeted upskilling and reskilling programs."[1]

Examinations

How do we quickly upskill our people to meet our client's needs? How do we get buy-in to invest in employee developmental initiatives? And are we actually lacking the scarce skills needed at the organization?

Solutions

Shift to a proactive approach for capacity planning. This will enable organizations to easily identify developmental opportunities and gaps in skills, while providing critical insights to the business.

1. 11th Annual State of Resource Management

Resourcing Criteria

Availability — Who is available by the start date requested by the client

Skills — Who has the skills needed to successfully deliver on the project

Budget — Who is the right job level to ensure the project is profitable

Utilization — What resources have the greatest utilization needs

Preference — Is the project aligned with any of the resources' career goals

Pipeline — What other work is coming in that we also need to staff

What Is?

Skill Criticalness

Scarceness

Importance

Requirements

Objective

Scarceness

Scarceness, unlike rareness, implies that there is some demand for the thing in question. Skill criticalness is not related at the project or individual resource request level, but it is linked to the comprehensive and overarching view of your organization's skills and capabilities.

Importance

Perhaps your organization doesn't sell work that requires these scarce skills often, but on the rare occasion that type of work does come through, chances are staffing it can prove challenging.

Objective

The primary objective of documenting skill criticalness is to avoid potential capacity restraints in the future by proactively identifying the critical skills at your organization and the employees who posses them.

Requirements

To implement a skill criticalness framework, a couple things need to be in place at your organization. The first is a service focused skill database, and clearly defined proficiency levels.

Skill Criticalness Requirements

Skill Databases

1 Skills inventory is utilized strategically to track employee aspirations and assist with employee engagement

**2** Ability to overlay supply and demand to identify gaps or surpluses of resources

3 Ability to align available supply against forecaster demand at role and aggregated level

Resource Management Maturity Model

|	Level 1	Level 2	Level 3	Level 4	Level 5
Skills Inventory	• Role names are not standardized • No Skills Inventory	• Some framework for role definition, but not controlled • Skills are tracked in a decentralized manner • No process around skills input or updates	• Skills Inventory managed centrally across organization • Limited confidence in skills data and accuracy • Roles formally defined	• Skills Inventory managed centrally with documented governance process • Ongoing process for resources to update skills • Skills and roles are normalized across organizational boundaries • Role names and definitions consistently align with the rates and costs of resources • Third party/contractor resources incorporated into the skills data base	• Skills and roles are well known and understood by the organization with strong compliance • Skills inventory is utilized strategically to track employee aspirations and assist with employee engagement • Ongoing quality management process • Skills data is synchronized across HR and delivery systems
Staffing	• Staffing activity occurs after a deal is sold • Lack of clarity in understanding resource and role requirements of new projects	• Staffing is decentralized and performed by line managers for their resources • Requests for resources come from many sources and in many forms	• Staffing discussions occur prior to a deal being closed/won by sales • Staffing function is centralized, but still have requests coming in from many sources • Standardized way in which resources are requested and assigned	• Resource request process is well-defined and followed across the business including prioritization and resolution process for staffing conflicts. • Most new work streams have a defined resource plan and soft-booked resources prior to being closed/won by sales • Technology assists staffing process	• All new work streams have a defined resource plan and soft-booked resources prior to being closed/won by sales • Centralized RMO utilizes scenario planning for resource assignments • Staffing effectively balances employee satisfaction with meeting the demands of the business • Staffing allocations and scenario planning are heavily automated
Forecasting	• No visibility to upcoming demand for resources • No understanding of current supply by roles and teams	• Information about new opportunities is ad-hoc, purely financial, and lacks appropriate resource info • Limited understanding of current supply by role and team	• Ability to see open and assigned roles as well as where there's available capacity • Demand data exists, but a lack of confidence and accountability in sources of demand data • Some forecasting for the next 30-60 days	• Ability to forecast (with confidence) resource demand for the next 3-6+ months by roles needed • Interlock meetings occur with the teams who create and manage demand to monitor upcoming demand • Ability to overlay supply and demand to identify gaps or surpluses of resources	• Strong interlock process with demand sources that drives strategic, data-driven decisions • Ability to align available supply against forecasted demand at role and aggregate level • Consistently utilize data to report on trends and adapt based on the data • High confidence in forecast data 3-6 months out with continuous improvement processes in place

Resource Management Maturity Model

Skill Databases

How your organization has structured its skill database is crucial to successful capacity planning. The more specific and granular your skills are, the more difficult capacity planning will be. In an ideal world, your skills will be directly linked to the services sold to your clientele.
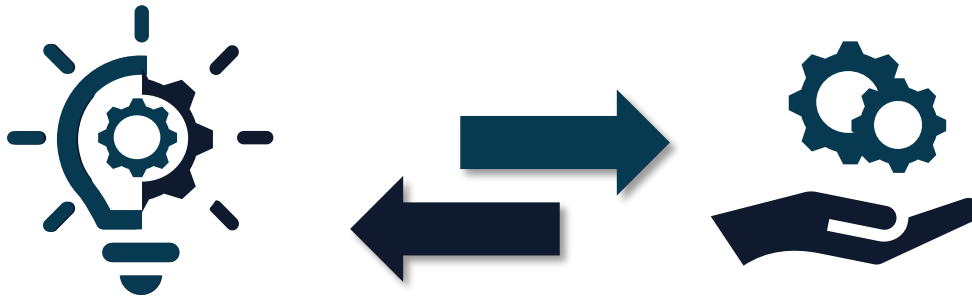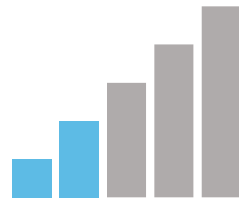
Skill Proficiencies

The number of levels your organization's proficiency scale will be determined on your organization's unique qualities and needs.
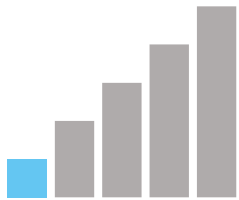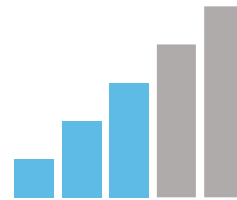
Basic
Foundational understanding of the specific skill. The focus is on learning. Ideal for shadowing.
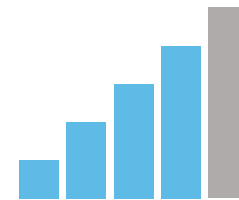
Intermediate
Practical understanding of the specific skill. The focus is on developing this skill through hands-on experience.
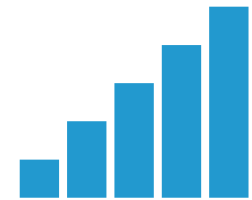
Proficient
Competent with a reliable understanding of the specific skill. The focus is on applying and growing this skill.

Advanced
Possess a high-level understanding of the specific skill. The focus is on leading teams and mentoring others.

Expert
Recognized expert and authority in the specific skill. The focus is on developing the strategic vision for the skill.

Capacity Planning

Capacity Planning

1

Capacity planning is the process of forecasting future resource needs to meet client demand.

Demand Forecasting

2

Demand forecasting estimates how much of a product will be in demand by clients in the future.

Skill Gap Analysis

3

Skill gap analysis identifies the current skills across employees versus the skills needed in the future.

Demand Forecasting

HISTORICAL DATA

Historically, what type of work does your company most commonly deliver? What type of work is the most profitable? Are there any trends you can identify from your pipeline or sold work? Is there any seasonality to your services?

FUTURE DEMAND

Forecast what type of work and the skills required is coming down the pipeline. Are there any external forces or market aspects that can impact your demand? What are historical trends that could impact future demand?

KEY TAKEAWAYS

What areas of the business leadership should invest in or abandon? What predictions can be made from the data analyzed? Are there any other factors that can impact your demand forecasting or demand planning?

Skill Gap Analysis

EXAMINE

Document your organizations current skillsets and proficiencies across all resources. What areas do you have a lot of skilled individuals in, and what areas are you lacking skilled individuals

IDENTIFY GAPS

Compare your demand data to your skills data. Are there any areas that you will have a surplus of resources in, and are there any areas you will have capacity restraints in.

SKILLS MATRIX

Build out a skills matrix for easy readability and tracking. Identify areas with future capacity restrictions that there are upskilling opportunities for.

Skill Criticalness Framework

Two Approaches

Manual Approach

Resource Capacity
Identify how many resources are proficient enough in the specific skill

Win Ratio
What is the likelihood that this specific skill or service will convert to sold work
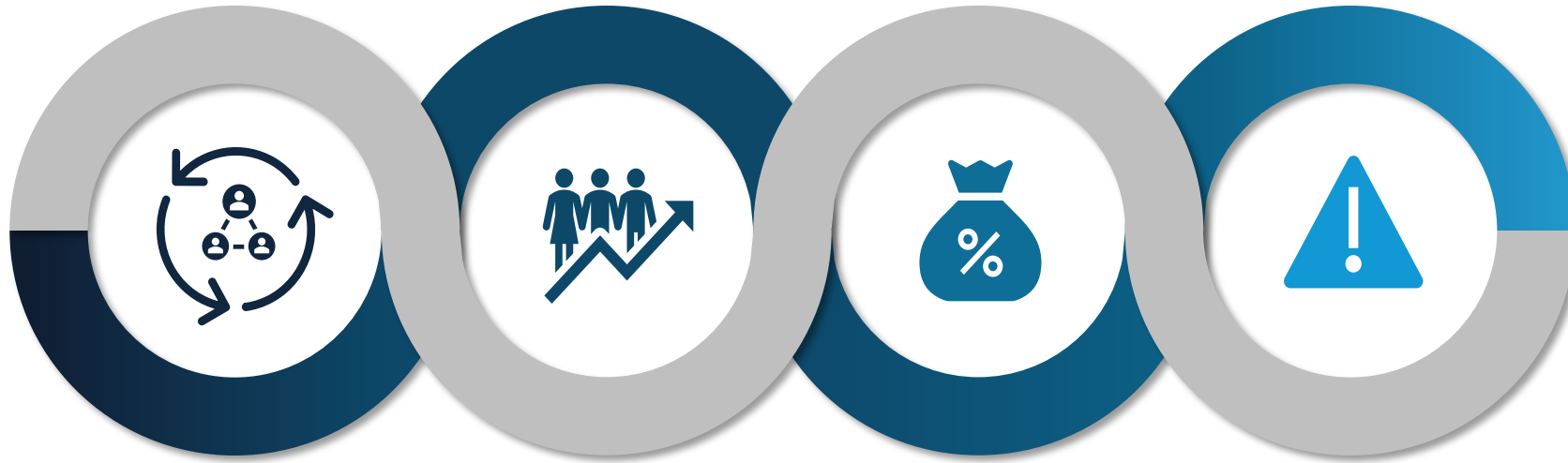
Demand Rating
Determine the frequency that a specific skill is requested by clients

Critical Skills
Flagged skills that are deemed critical for capacity planning

Manual Approach

Skill Name	Resource Capacity	Demand Rating	Win Ratio	Skill Criticalness
Skill Example A	High Capacity	Most Requested	Low Win Ratio	Least Critical
Skill Example B	Low Capacity	Least Requested	High Win Ratio	Most Critical
Skill Example C	Medium Capacity	Moderately Requested	Average Win Ratio	Moderately Critical

Mathematical Approach

Resource Capacity
Identify how many resources are proficient enough in the specific skill divided by the total number of possible resources

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Demand Rating
Total number of won opportunities that requested a specific skill, divided by the total number of all opportunities regardless of skill requested

+

Win Ratio
Total number of won opportunities that requested a specific skill, divided by the total number of all opportunities that requested that same specific skill

=

Critical Skills
The result of dividing your resource capacity by the sum of your demand rating and win ratio will be your demand planning score, the lower the score, the lower your capacity and the more critical a skill is

Skill Criticalness Equation

$$\frac{\text{Resource Capacity}}{(\text{Demand Rating} + \text{Win Ratio})}$$

Example of Mathematical Approach

Company summary:
Mid-size technology consulting company that specializes in data migrations, custom application development, and UX services

Java Developer

60% **Resource Capacity:** Total of 50 software developers, 30 of which are proficient in Java development

18% **Demand Rating:** 60 won Java opportunities out of the total of all 340 opportunities

35% **Win Ratio:** 60 won Java opportunities out of a total of 170 Java opportunities

113% **Skill Criticalness:** Resource Capacity (60%) divided by the sum of Demand Rating (18%) and Win Ratio (35%)

Golang Developer

4% **Resource Capacity:** Total of 50 software developers, 2 of which are proficient in Go development

0.3% **Demand Rating:** 1 won Golang opportunity out of a total of 340 opportunities

9% **Win Ratio:** 1 won Golang opportunity out of the total of 11 Golang opportunities

43% **Skill Criticalness:** Resource Capacity (4%) divided by the sum of Demand Rating (0.3%) and Win Ratio (9%)

Which skill has possible future **capacity constraints?**

Resourcing Criteria

Skills
Who has the skills needed to successfully deliver on the project

Resource request for a Java developer

Questions to Ask Yourself

Does this resource have a critical skill?

&

What other skills does this resource also have?

Who of the available resources is the best option for the Java developer request?

Questions to Ask Yourself

Does this resource have a critical skill?

&

What other skills does this resource also have?

Resourcing Criteria

Skill Matrix

Available Resource	Job Level	Java	C#	Golang*	JavaScript	React*	# of Skills < Proficient	# of Skills Proficient	Total Skills
John Smith	Junior Associate	1	4	0	1	0	2	1	3
Jane Doe*	Associate	4	0	1	5	4	1	3	4
Aisha Patel*	Senior Associate	4	1	4	3	2	1	4	5
Carlos Rodriguez*	Manager	5	0	3	0	0	0	2	2
Mei Lin*	Senior Manager	2	0	2	5	3	2	2	4
David Kim	Manager	3	5	0	1	1	2	2	4
Erica Wilson	Junior Associate	1	3	0	0	0	1	1	2
Jamal Johnson	Associate	4	0	1	3	0	1	2	3

Summary

Skills are structured according to your organization's service offerings

There is a defined proficiency rating scale

An analysis has been performed, and critical skills are identified

Critical skills are flagged in both resourcing and demand forecasting

Strategic planning and business insights

Impact of Training

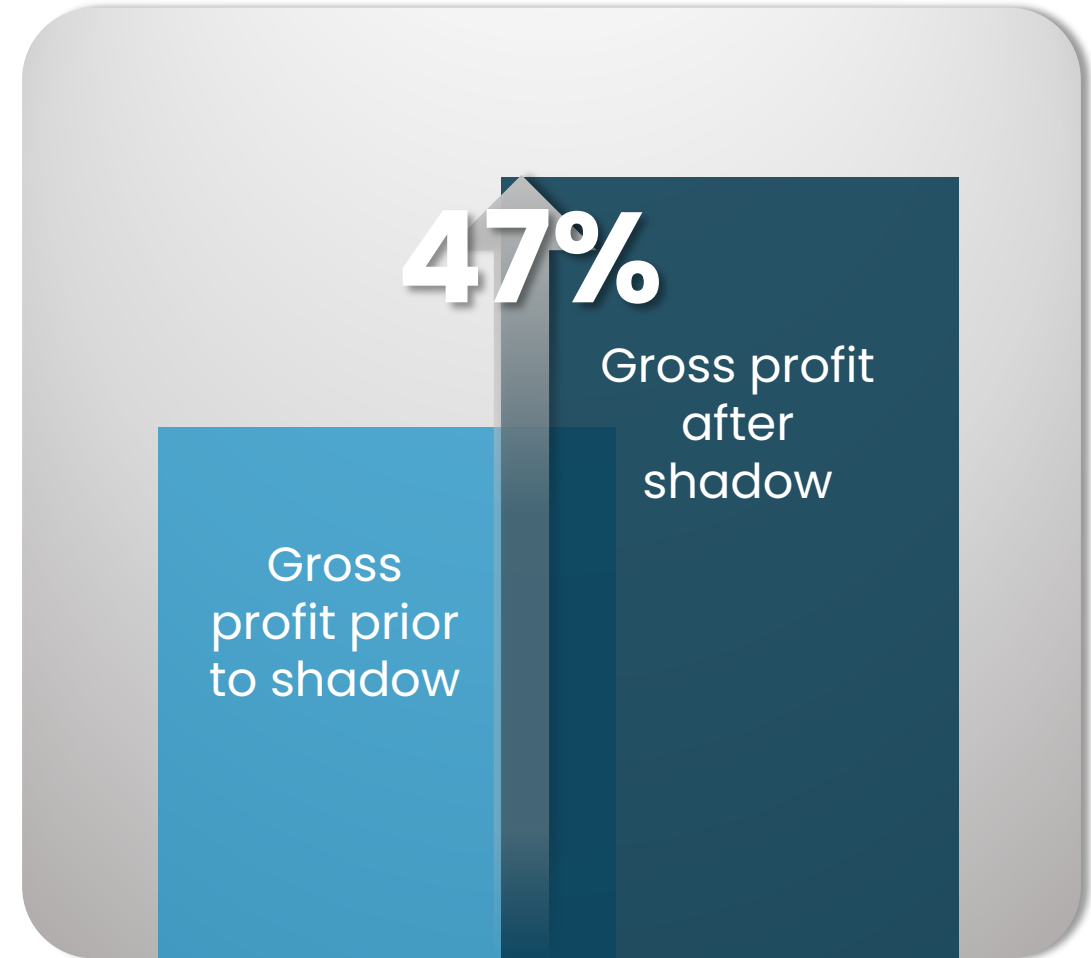Company had a lack of resources with mobile pen testing, there was a critical need for more capacity

Identified consultant with mobile pen testing at the basic level and scheduled him on a shadow so he could get hands-on experience

Scheduled a reverse shadow after initial shadow and was able to get him cleared to deliver mobile pen tests

Afterwards, ran an analysis to see if there was an impact on the profit he generated from being cleared to deliver mobile pen testing following his shadows

47%

Gross profit prior to shadow

Gross profit after shadow