

# The Evolution of TTO Staffing Models: Results from the Wellspring Innovation Surveys

Robert A. Lowe, Ph.D.

April 26, 2023



**Wellspring**  
Knowledge In Sight™

# Webinar Reminders

## Questions

Please ask questions in the webinar application (Q&A). We will likely hold until the end to respond.

We'll do our best to answer all questions. If we cannot get to your question, we will send questions and responses by email to attendees.

## Follow-up

The recording will be available in the Resource Library

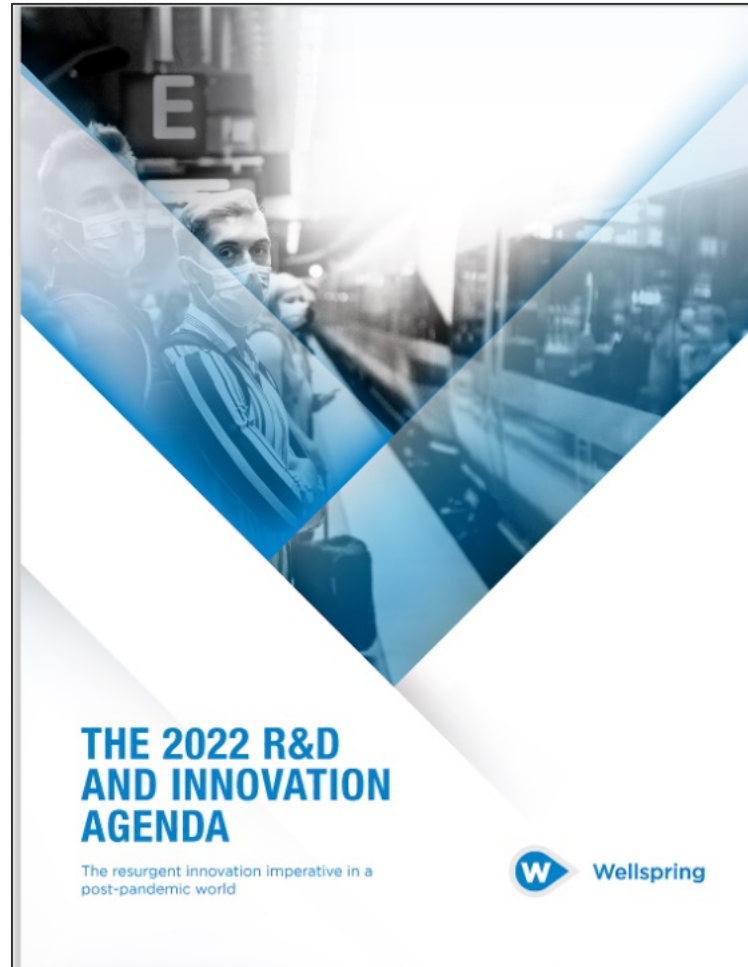
If you have questions afterward, contact us for further discussions or demos.

# The Wellspring Innovation Research Series

2021



2022



2023



# Today's Agenda

**Intro:** Very brief background on Wellspring

**Demand:** Corporate landscape for licensing and partnering

**Supply:** TTOs current hiring trends

**Equilibrium:** How TTOs are adapting

# Innovation Has Evolved

The new innovation game is global, distributed, and accelerating. Every half hour, **720 patents** are filed, **150 research articles** are filed, and **70 new startups** are founded.

**1 SUPPLIER**

*Western Electric*



**200+ SUPPLIERS**

Omnivision. SRI International

CIRRUS LOGIC IQE AVAGO TECHNOLOGIES

FAIRCHILD SEMICONDUCTOR TriQuint SEMICONDUCTOR BROADCOM

CORNING AuthenTec Siri

SKYWORKS win SEMICONDUCTORS CORP. ST



# Innovation Supply Chain



Critical activities that move promising ideas from initial research in the lab to the development and commercialization of new products.



# ~900 organizations use our solutions and services



U.S. Department  
of Veterans Affairs

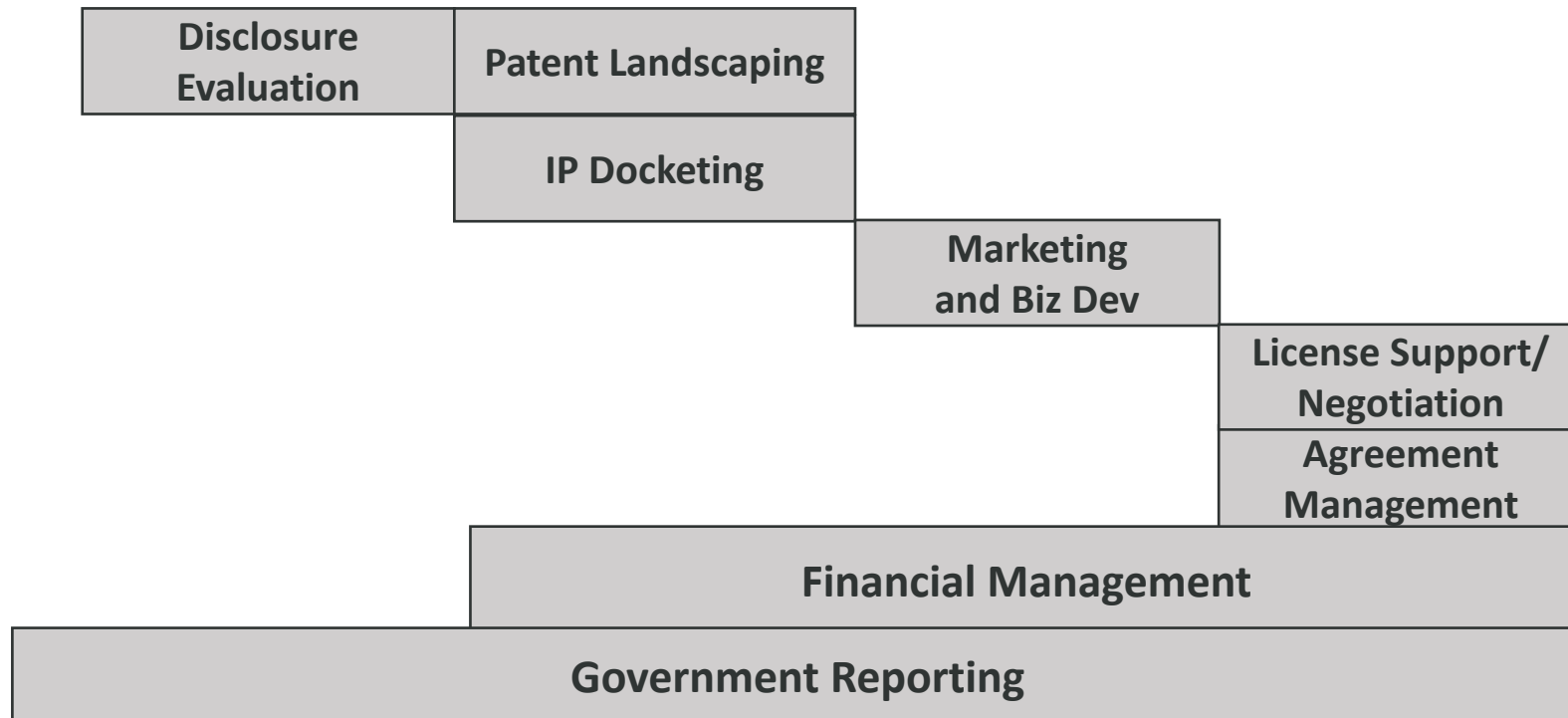
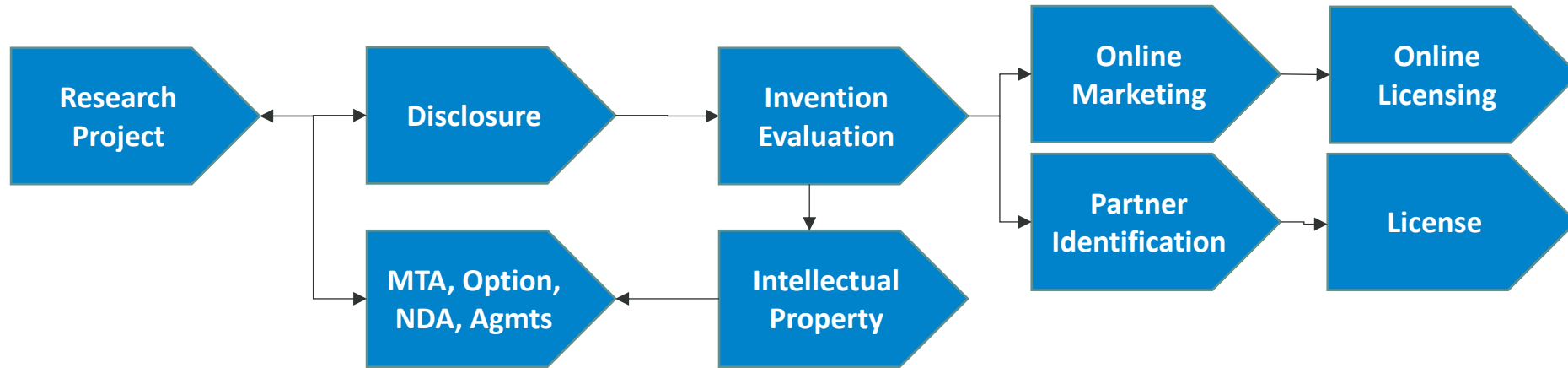


U.S. DEPARTMENT OF  
**ENERGY**



## We Help the World Innovate

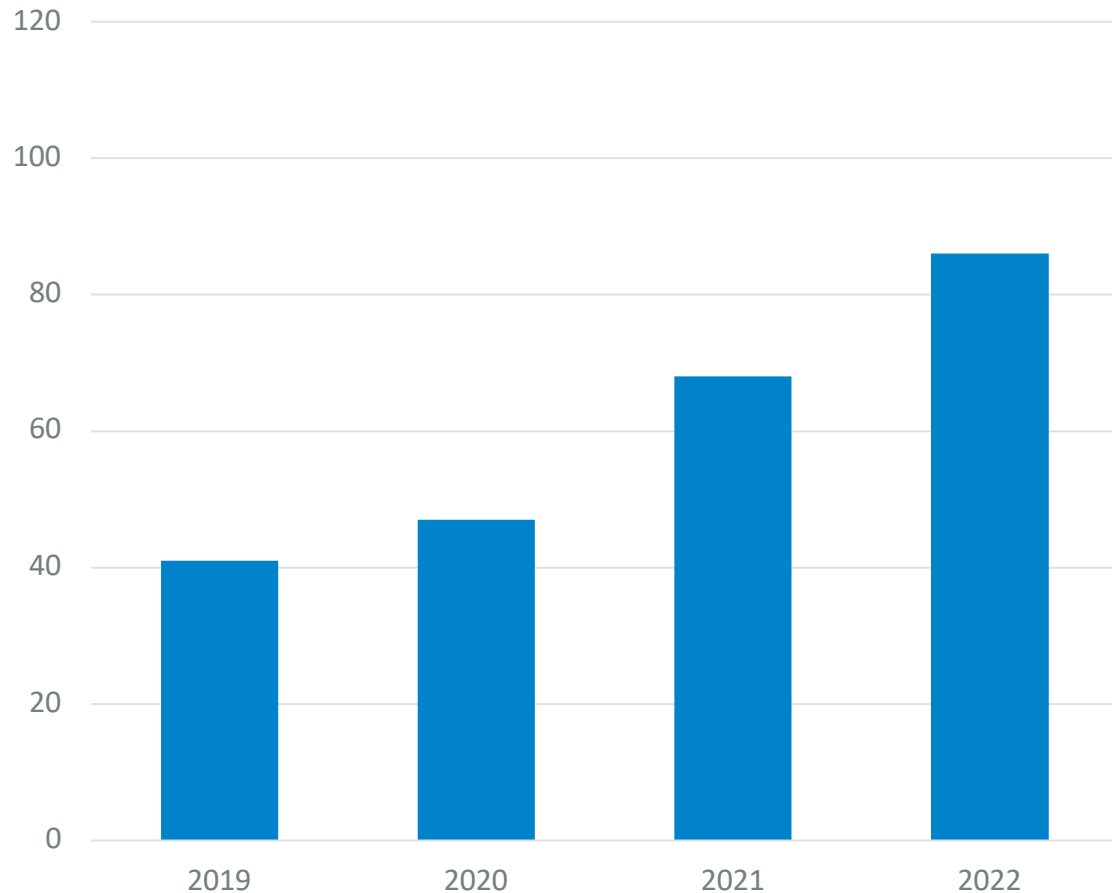
# Full Range of Support for Technology Transfer



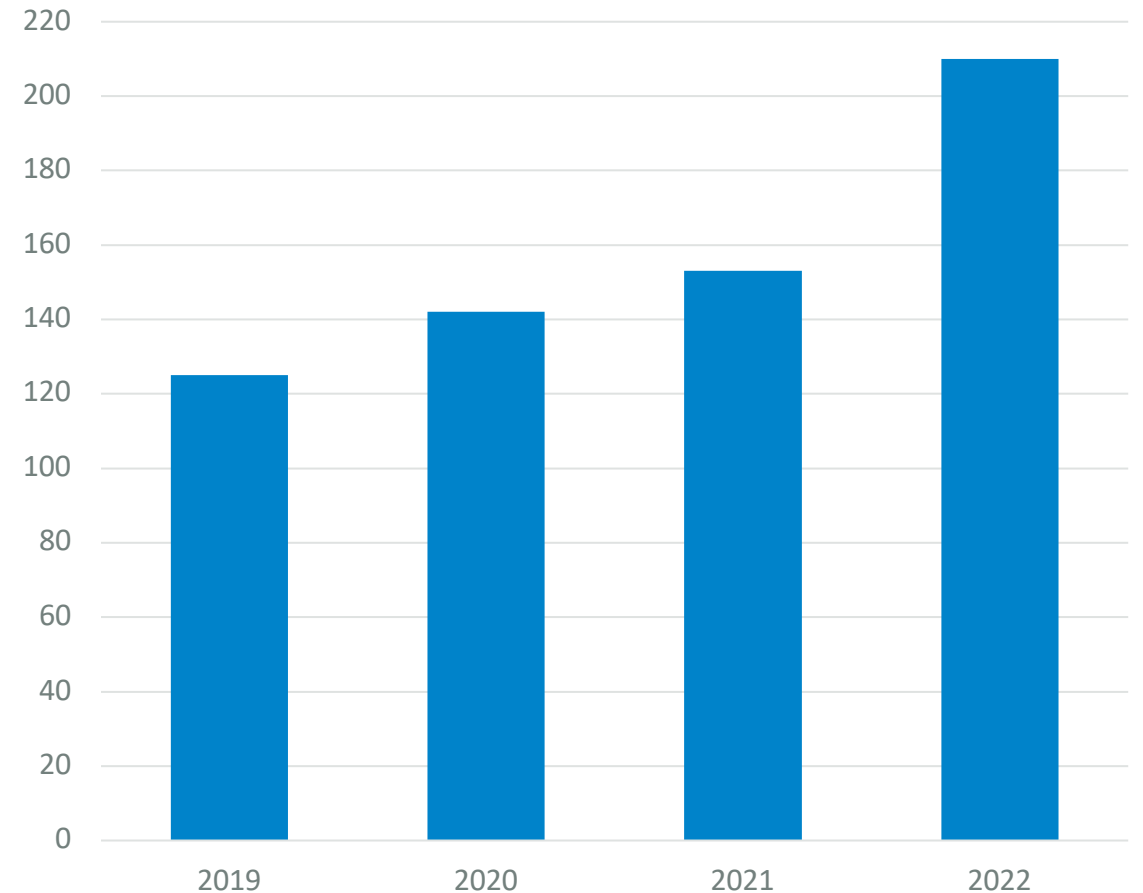


# Wellspring has experienced significant growth in consulting services

## # of Consulting Services Clients



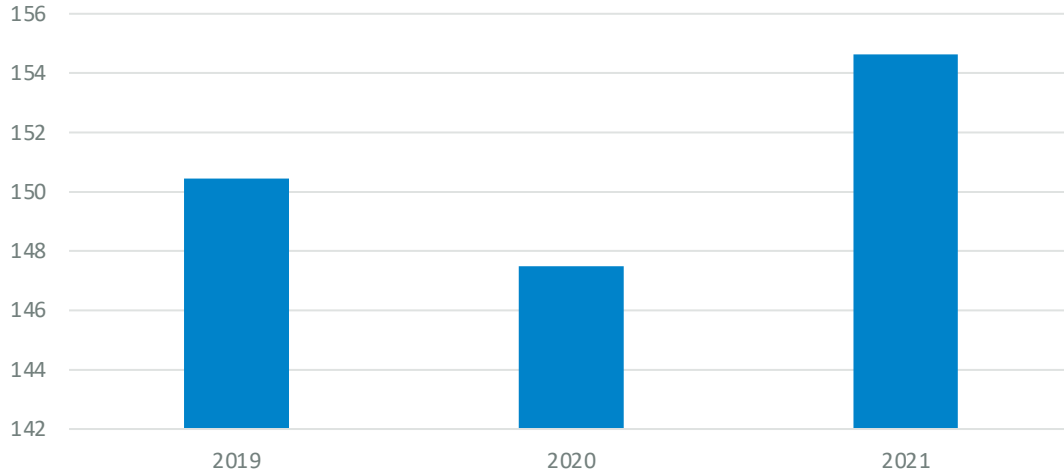
## # of Contracted Consulting Projects



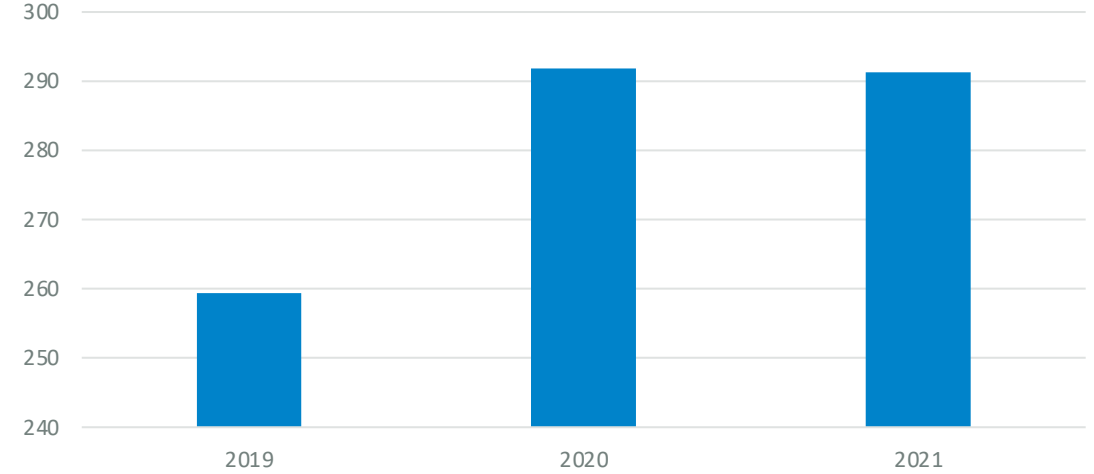
# Demand for Tech Transfer Services is Growing Rapidly

# Tech Transfer Throughout COVID

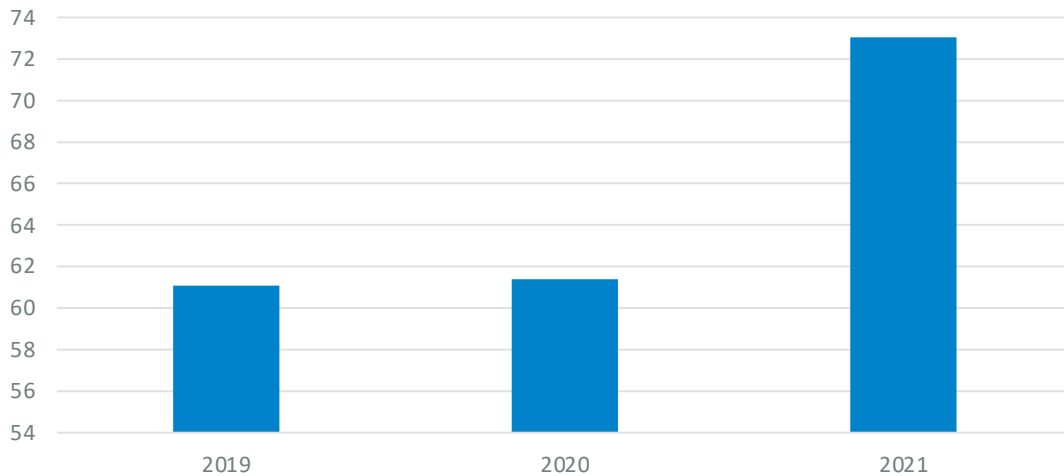
## Disclosures per Institution



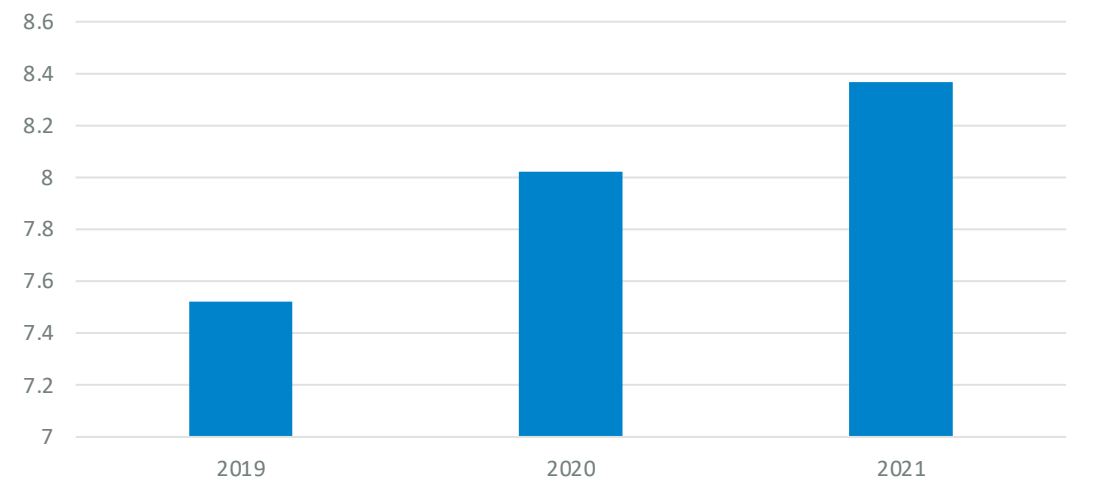
## Patent Applications per Institution



## Licenses per Institution



## Startups per Institution



Source: AUTM Licensing Surveys, 2019-2022

**Wellspring**

# Hiring in Tech Transfer Did Not!

Total staff sizes remained relatively flat among AUTM survey respondents. As a result...

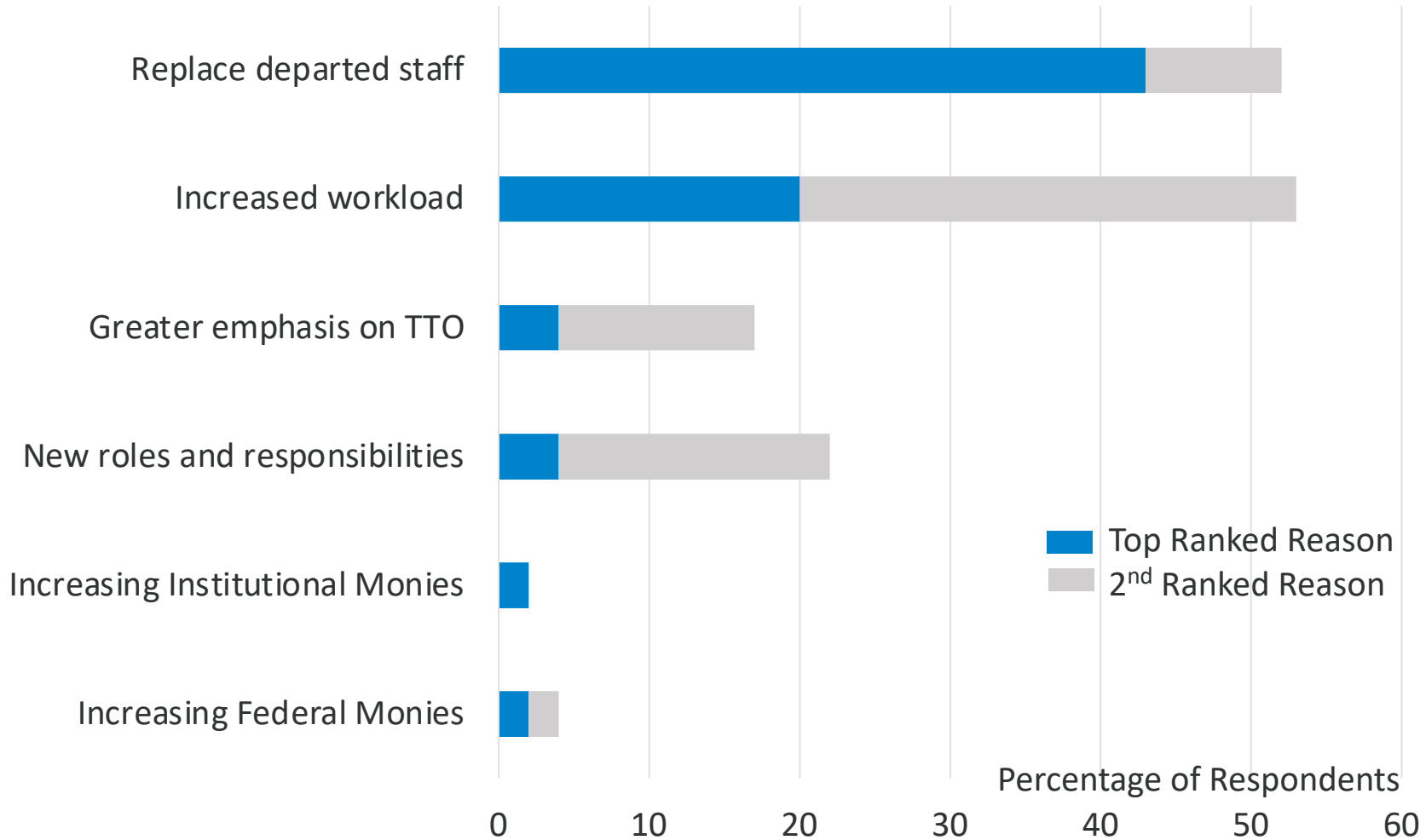
Licenses per FTE are up 18% over the past 3 years

Licenses per institution are up 26% over the past 3 years

Annual patent apps are up 12%, thus cumulative portfolios are already rising in the future!

# Staff departures are driving hiring decisions

Which of the following reasons will drive hiring in 2023?



## Notes

Everyone is watching staff depart...

“Replacing departing staff” as the **#1 challenge is uncorrelated** with institution size, region, city size, and organization type.

Source: *The 2023 Technology Transfer Staffing Survey*, Wellspring Worldwide Inc

**Wellspring**

© 2023 Wellspring Worldwide Inc.

# Comparing Innovators vs. Laggards

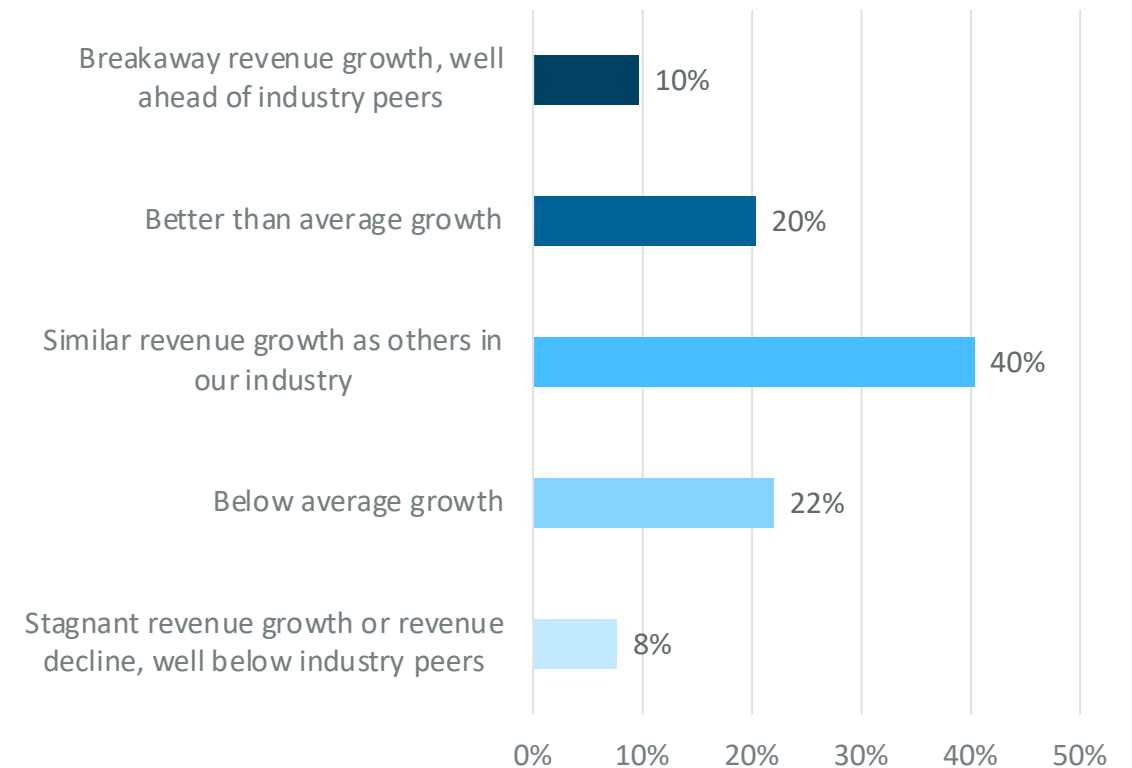
## Key research questions

- Can large organizations really innovate like startups?
- Do high-growth companies innovate differently than others?
- Which innovation practices (if any) drive corporate performance?

## Econometric model

- Reveals the innovation practices of high-growth companies
- Based on multinomial logistic regression
- Controls for a wide variety of variables (size, industry, geography, etc.)

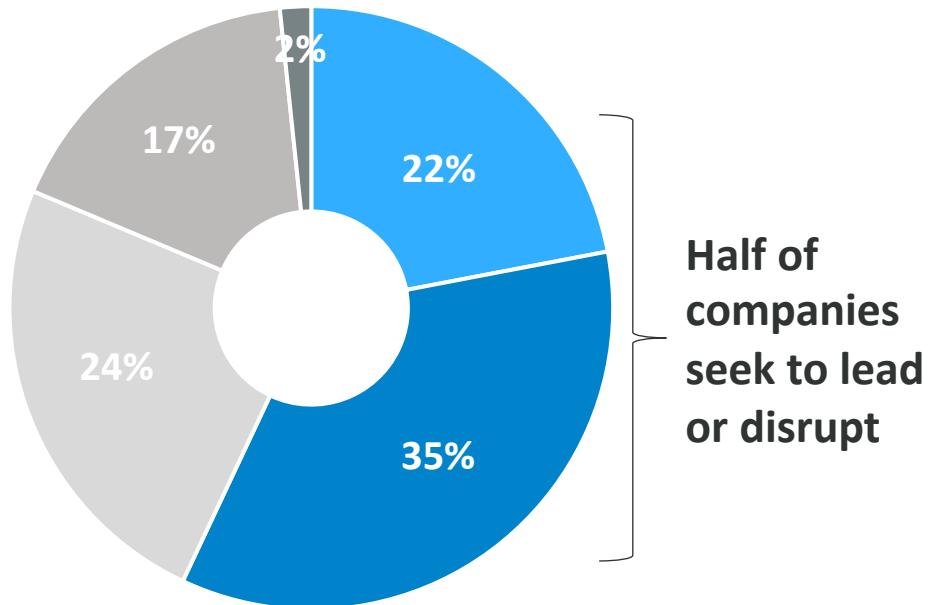
How would you describe your company's revenue growth in the industry over the past two years?



# Corporate ambitions were on the rise in 2022

## Overall ambition

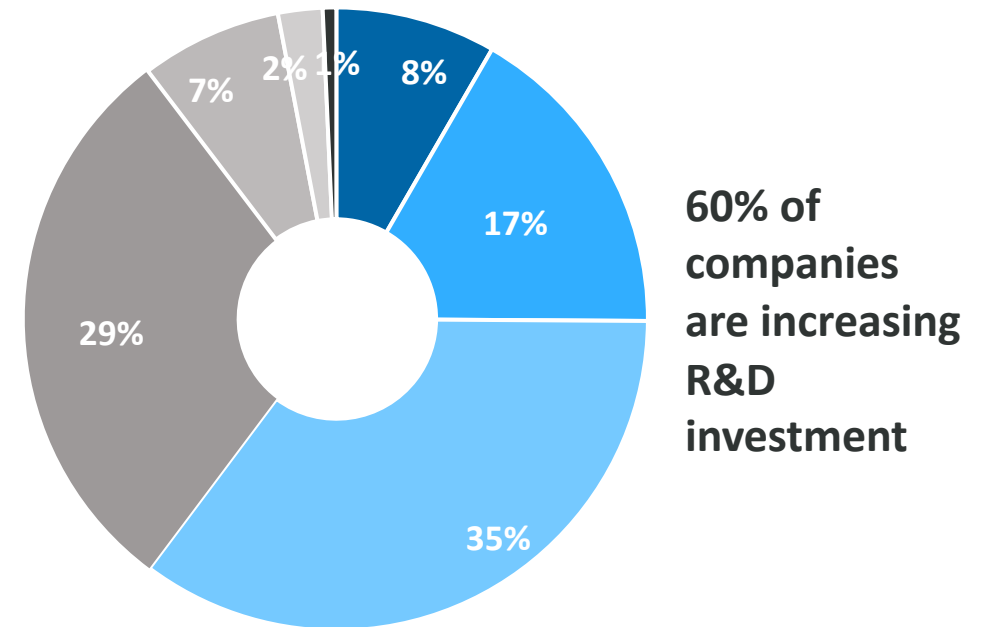
Which of the following best describes your organization's innovation strategy within your industry?



- We aim to disrupt our current industry.
- We aim to be a leader near the front of our industry.
- We aim to be a fast follower.
- We focus on driving efficiency and scale with innovation acquired from others.
- Not sure/don't know

## Innovation spending

How much do you expect your company's overall innovation spending (including R&D spend) to increase or decrease over the next 12 months?



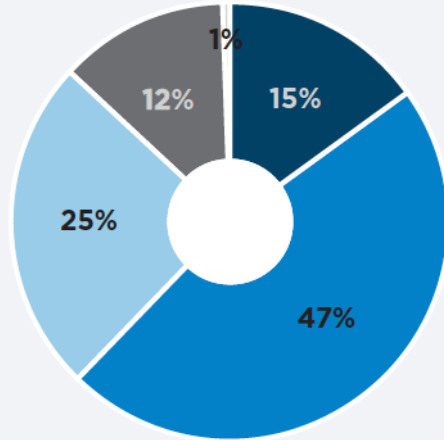
- Increase > 10%
- Increase 5 to 10%
- Increase 0-5%
- Stay the same
- Decrease 0-5%
- Decrease 5-10%
- Decrease > 10%

Source: *The 2022 R&D and Innovation Agenda*, Wellspring Worldwide Inc  
**Wellspring**

# Companies remain optimistic about collaborative innovation

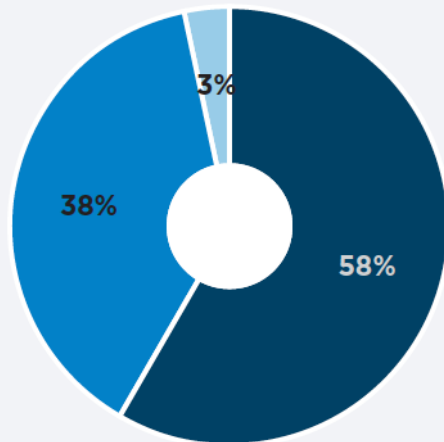
To what degree have your organization's innovation ambitions changed within the past 12 months?

- 15% Significantly more ambitious
- 47% Somewhat more ambitious
- 25% About the same as before
- 12% Somewhat less ambitious
- 1% Significantly less ambitious

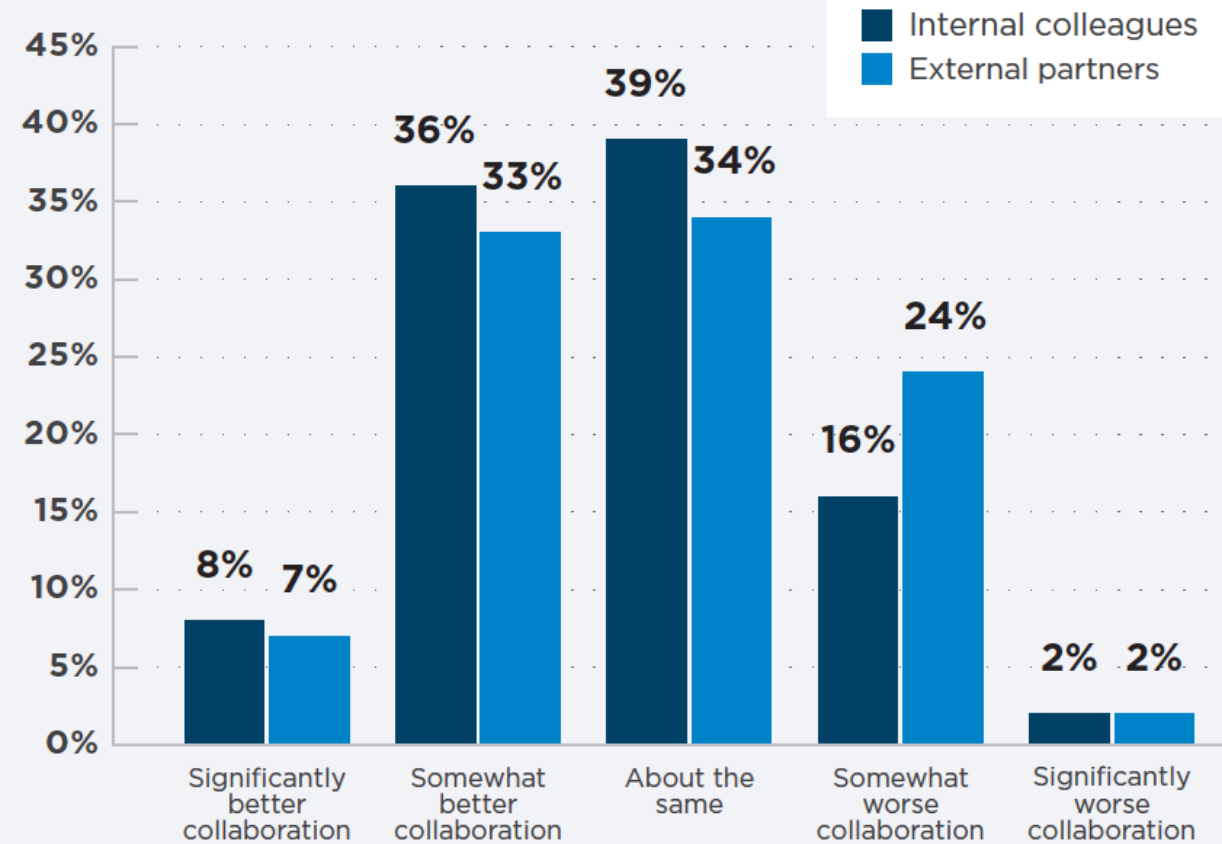


We have a well-articulated corporate innovation strategy.

- 58% Strongly agree
- 38% Somewhat agree
- 3% Neither agree nor disagree
- 0% Somewhat disagree
- 0% Strongly disagree

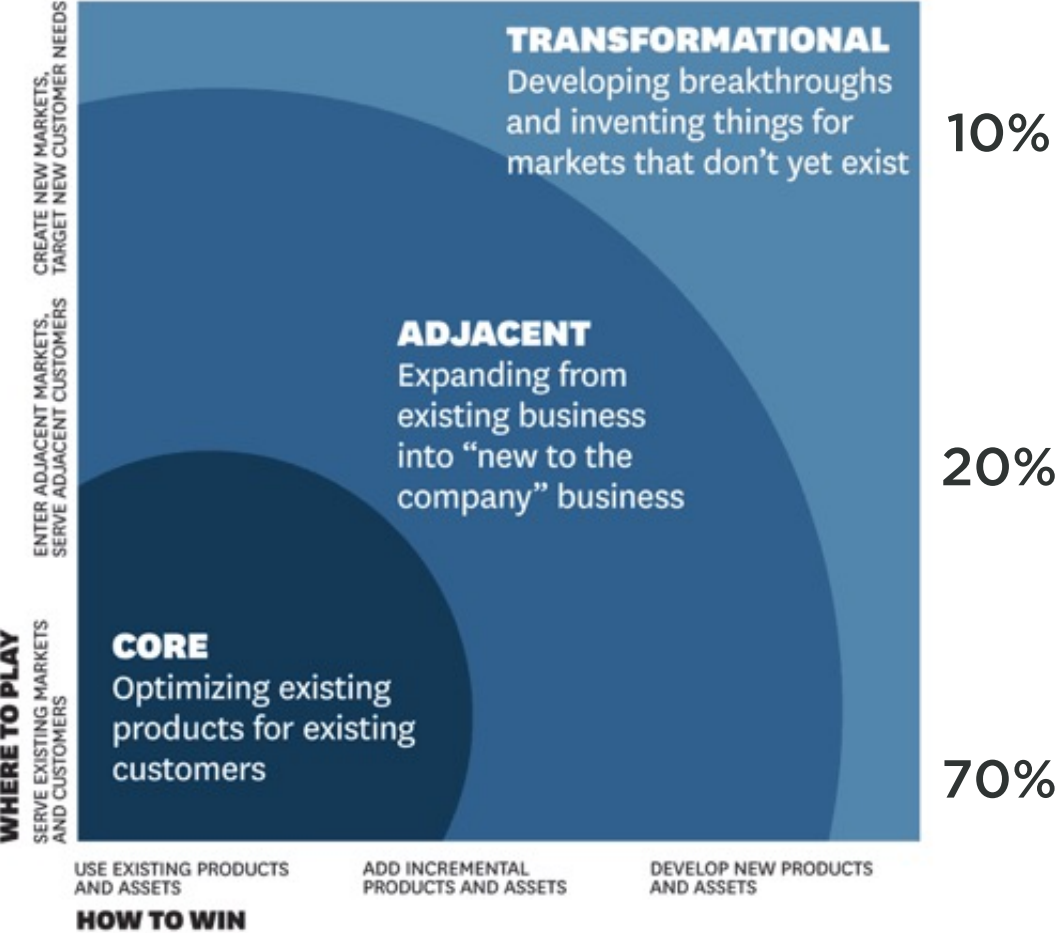


How has the COVID-19 pandemic affected your ability to collaborate on innovation projects?



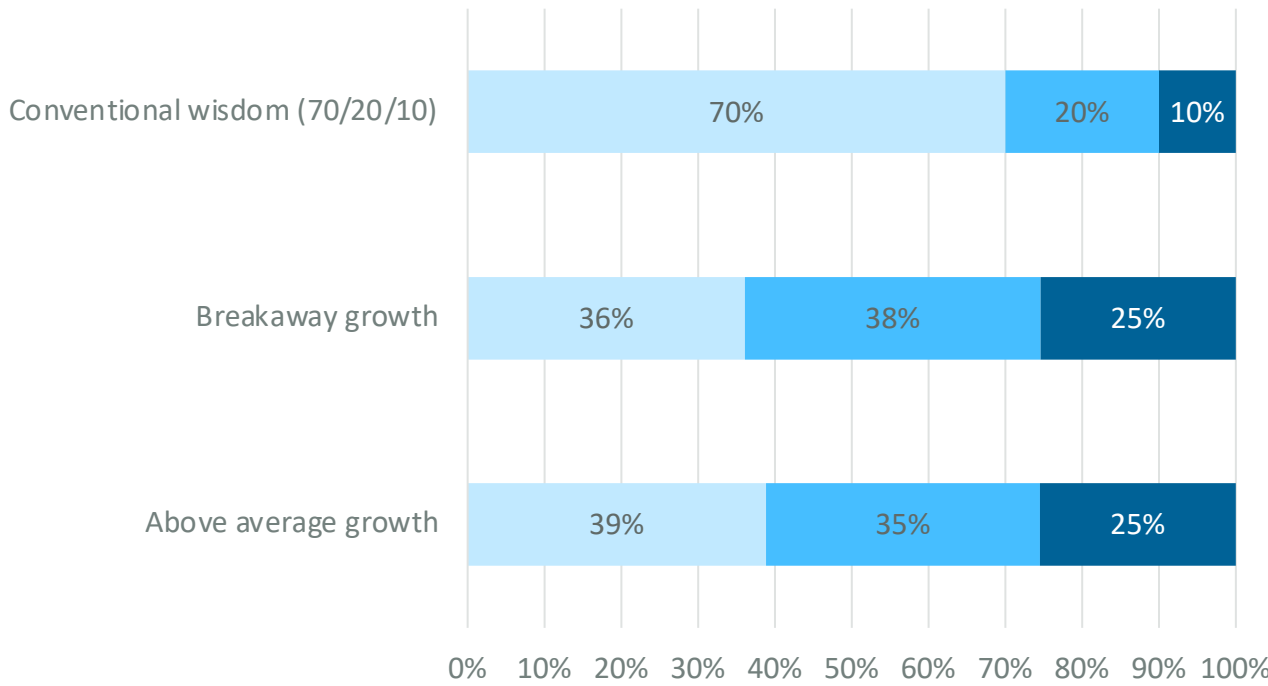


# High-growth companies prioritized H2/H3 innovation



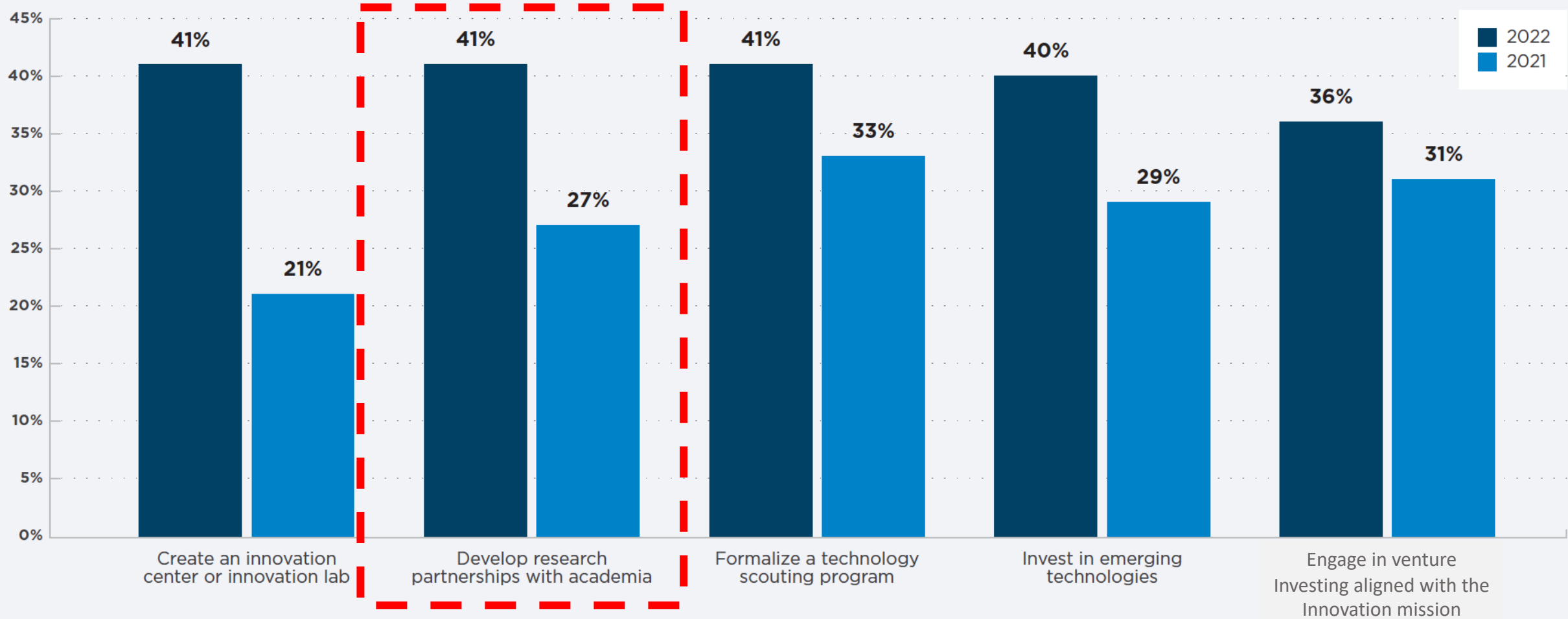
Sources: [McKinsey Quarterly](#), December 1<sup>st</sup> 2009  
[Harvard Business Review](#), May 2012

What percentage of your company's innovation efforts are devoted to each of the following types of innovation?



- Horizon 1 (incremental improvements, product line extensions)
- Horizon 2 (mid-term bets in adjacent or related areas)
- Horizon 3 (long-run strategic bets to unlock new-to-world value)

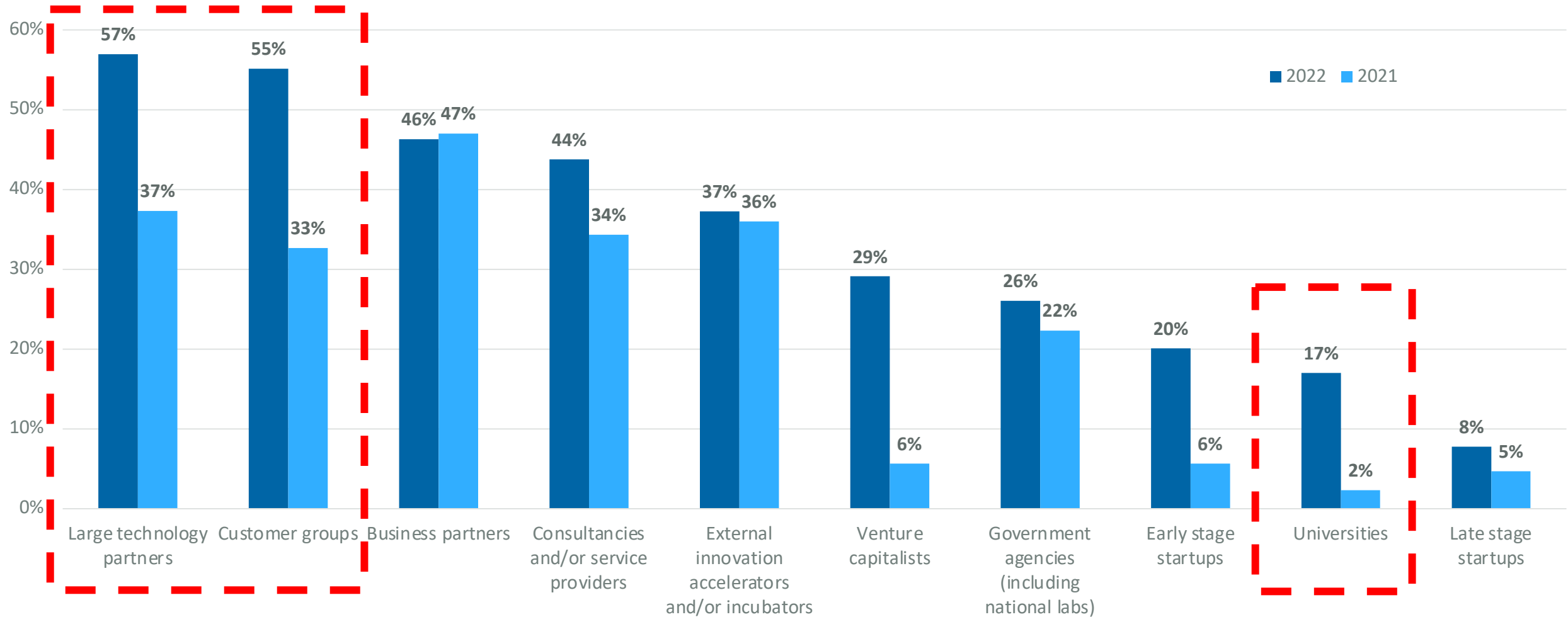
# Q: Which of these actions has your firm launched this year?



Source: *The 2022 R&D and Innovation Agenda*, Wellspring Worldwide Inc

# Companies prioritize new partnerships

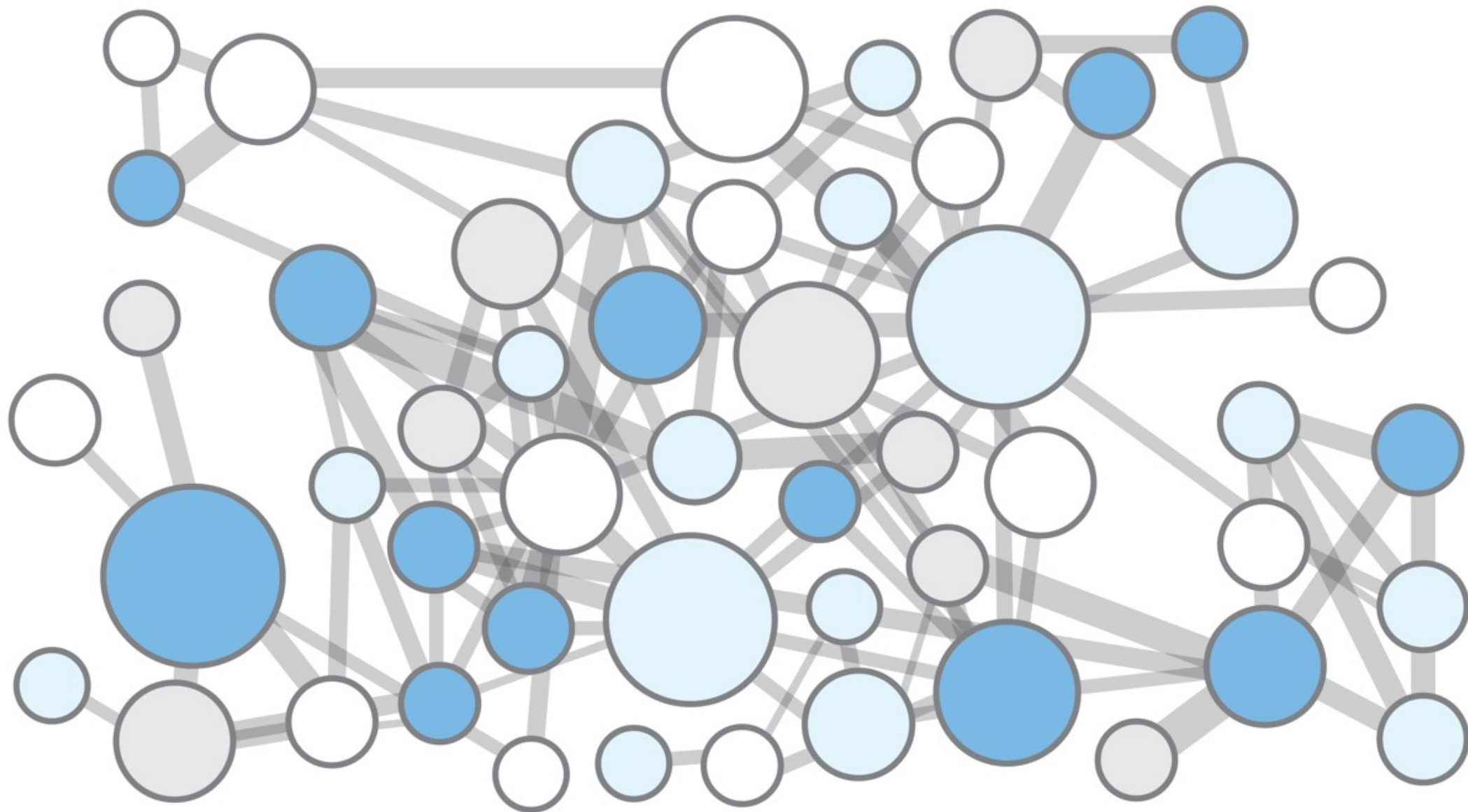
How often do each of the following **ecosystem partners** contribute to your company's innovation efforts? (percent answering "consistently")



Source: *The 2022 R&D and Innovation Agenda*, Wellspring Worldwide Inc

**Wellspring**

© 2023 Wellspring Worldwide Inc.



# Are TTOs Preparing for Increased Licensing and Partnering?

# The Wellspring Innovation Research Series



## Survey of Tech Transfer Offices

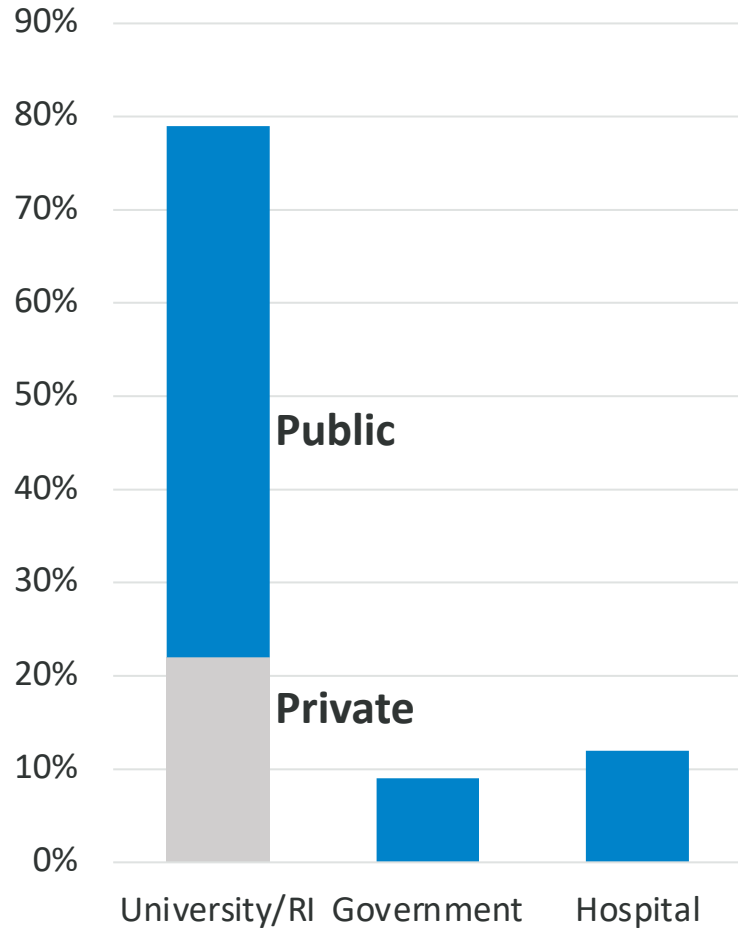
- Directors and Ops Leads: those leading staffing decisions
- December 2022-January 2023
- Respondents were unpaid volunteers, all Wellspring clients. Receive detailed report and benchmarking analysis.

## Questions and Analysis

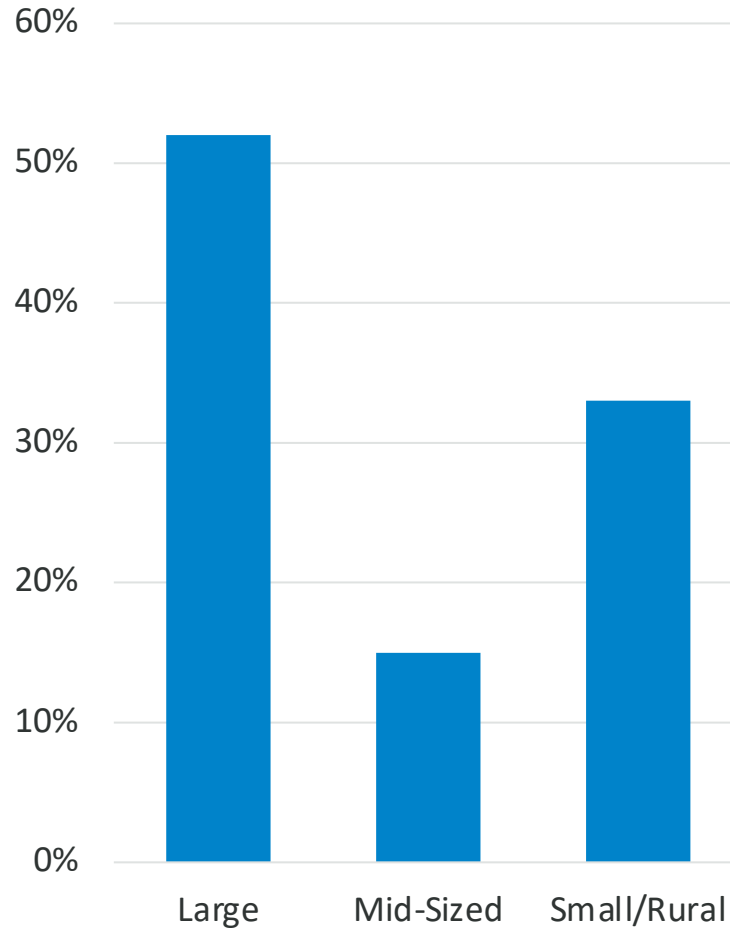
- Brief questionnaire (average <5 minutes to complete)
- Survey focused on expected hiring in 2023, leveraging consultants, challenges in hiring process
- Control variables: Office size, country/region, city size, type (hospital, gov, university), public vs. private institution

# Sample Summary Statistics

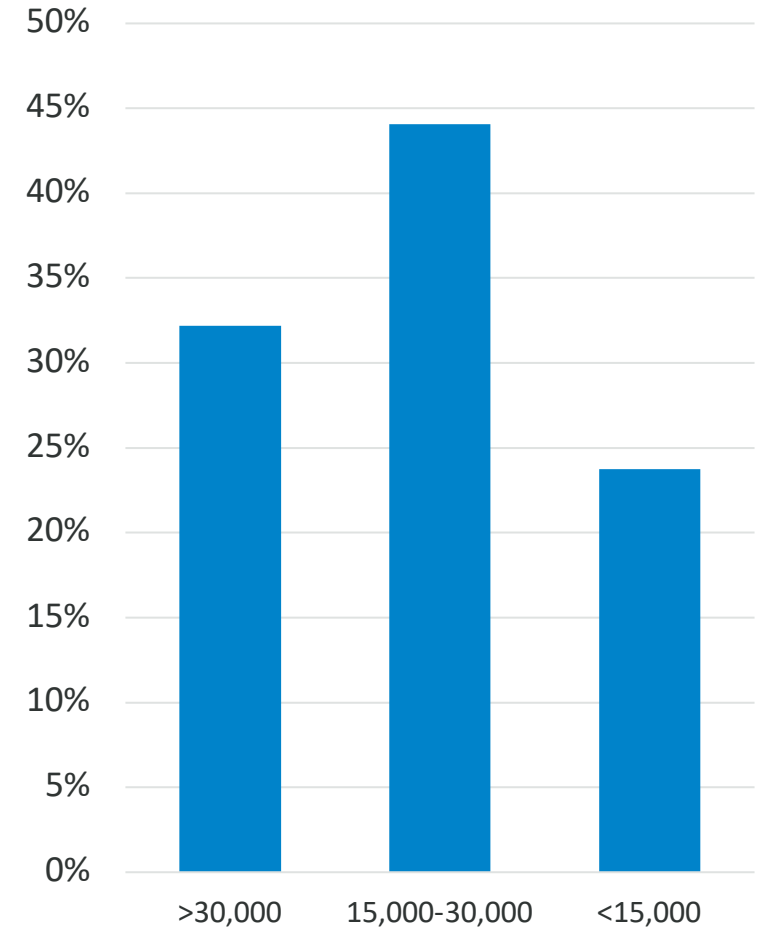
## Type of Organization



## Size of City

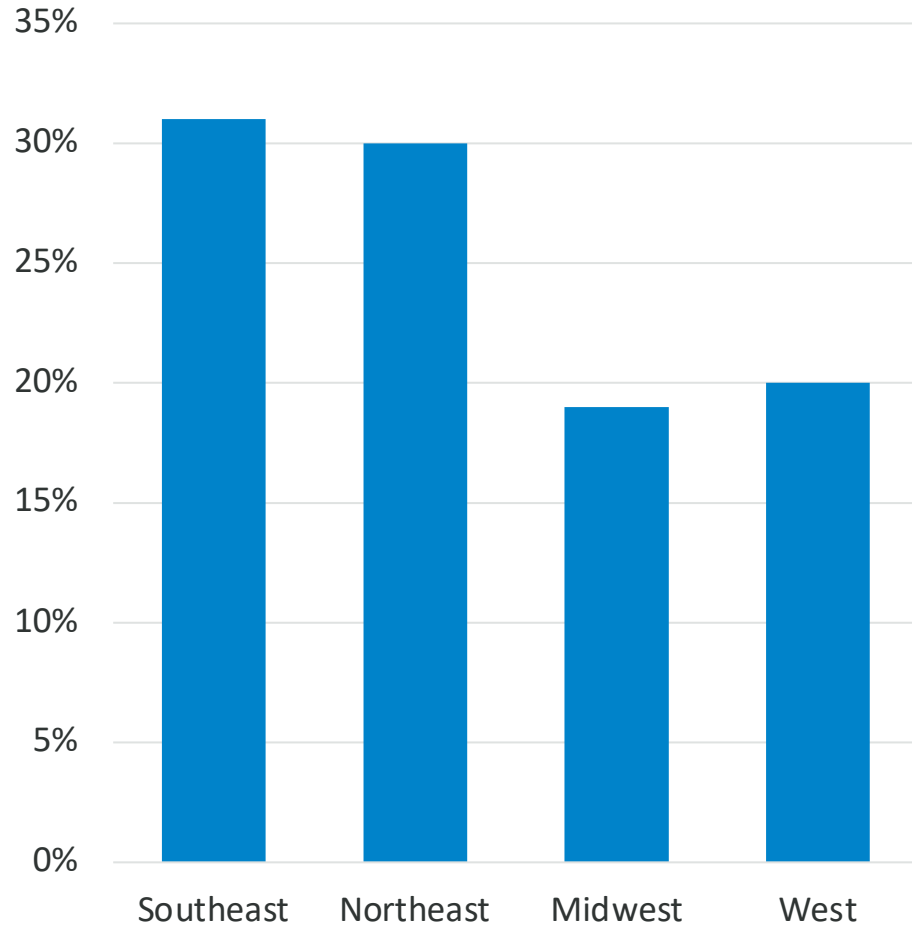


## Student Population (Univ only)

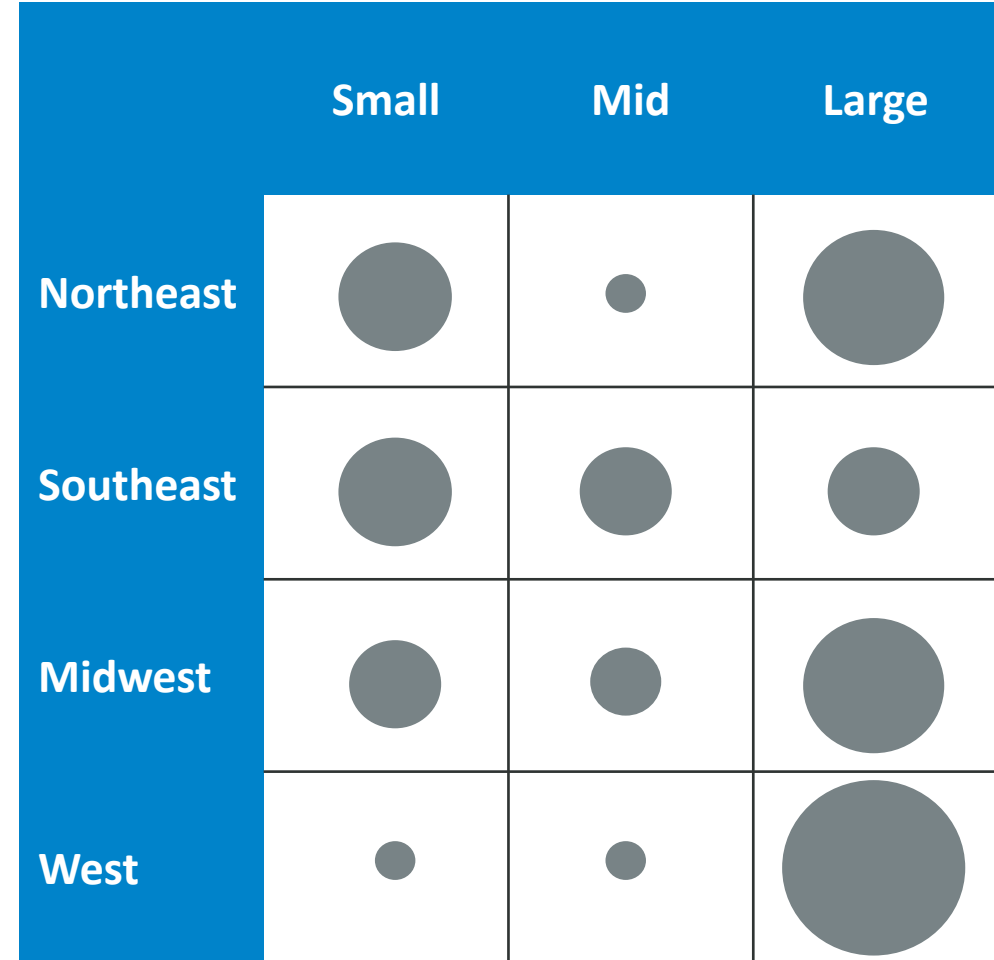


# Sample Summary Statistics

Region (US/Canada)



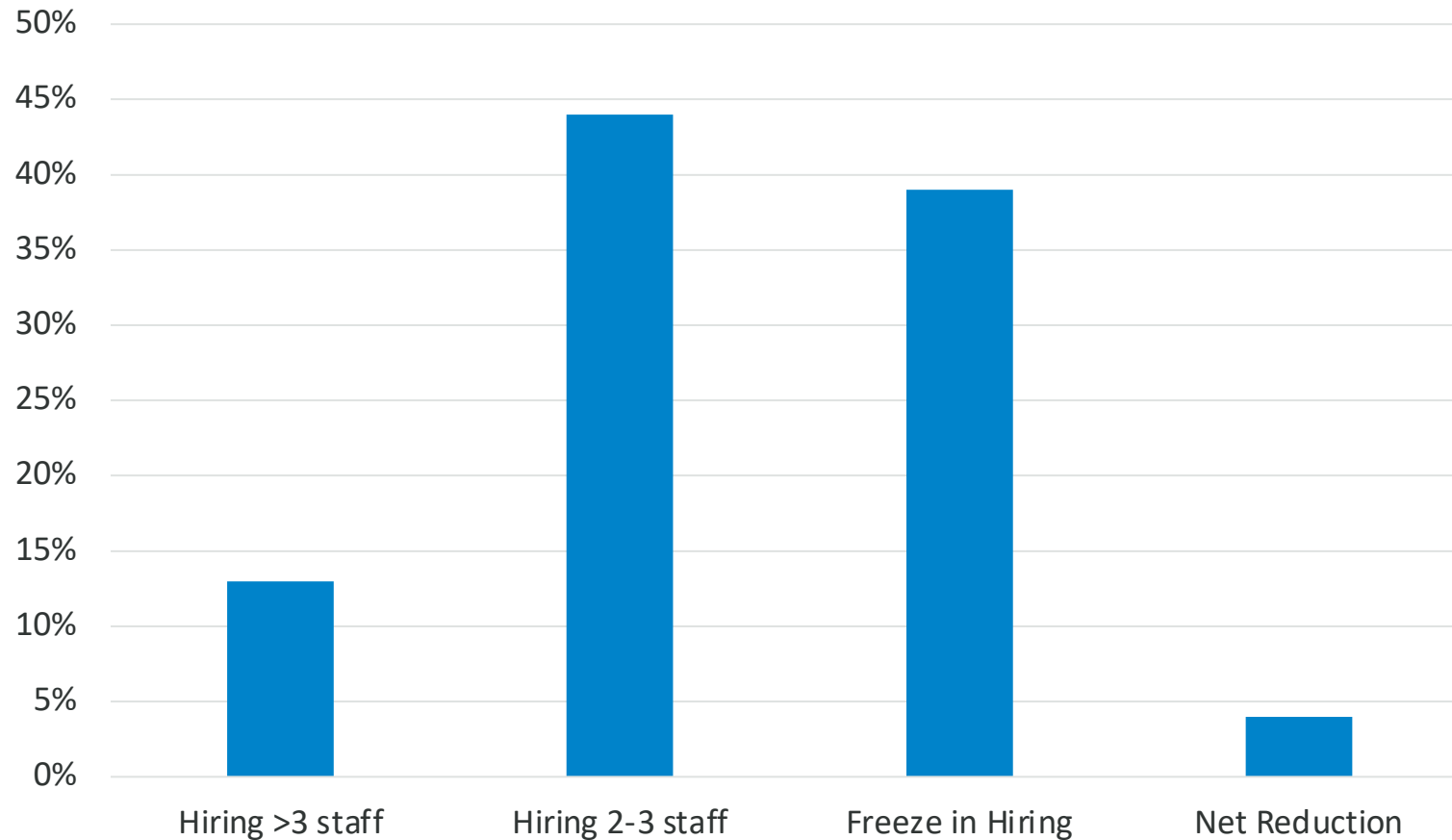
Size of City Location by Region





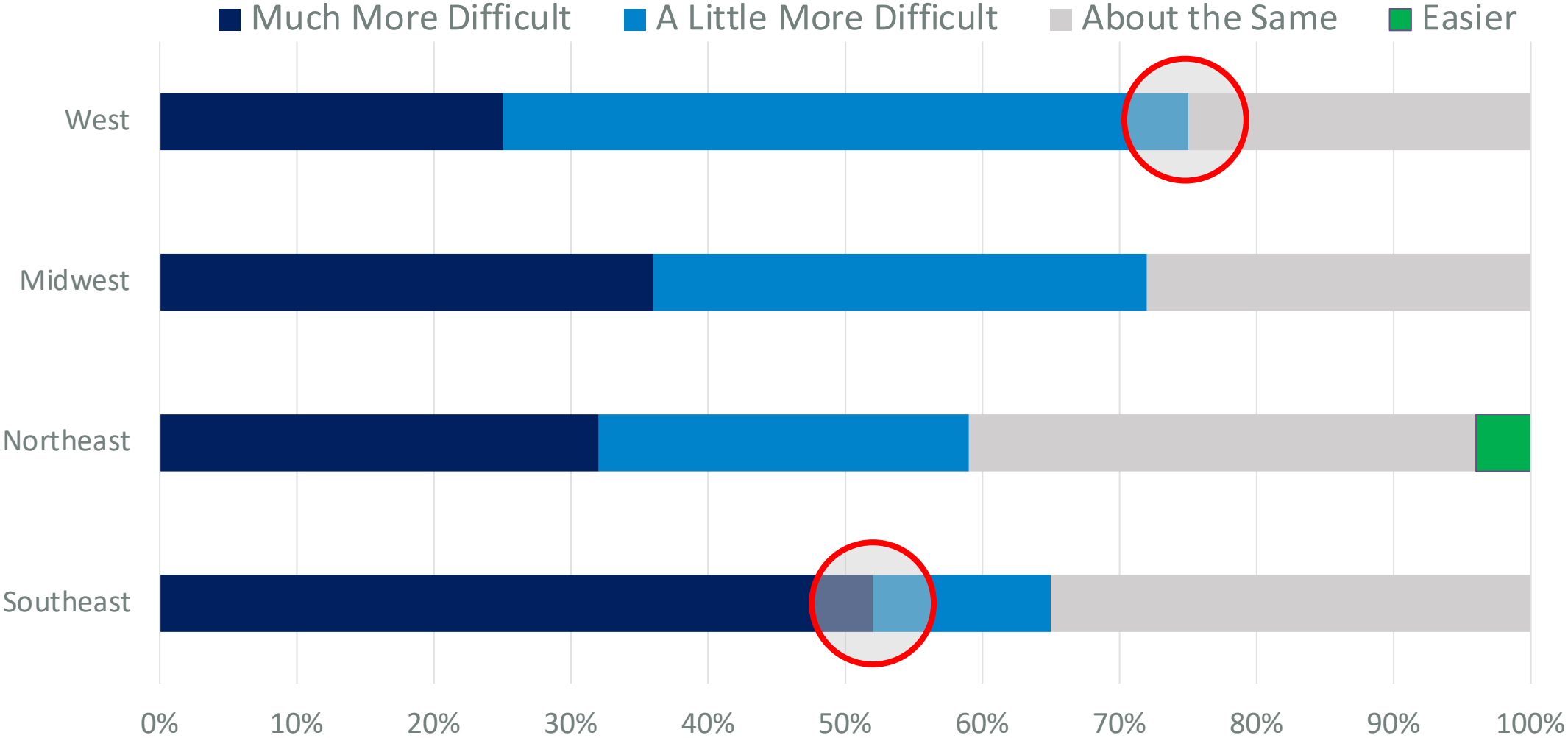
# ~60% of TTO's are preparing for growing workloads

## What are your plans for hiring in 2023?



Source: *The 2023 Technology Transfer Staffing Survey*, Wellspring Worldwide Inc

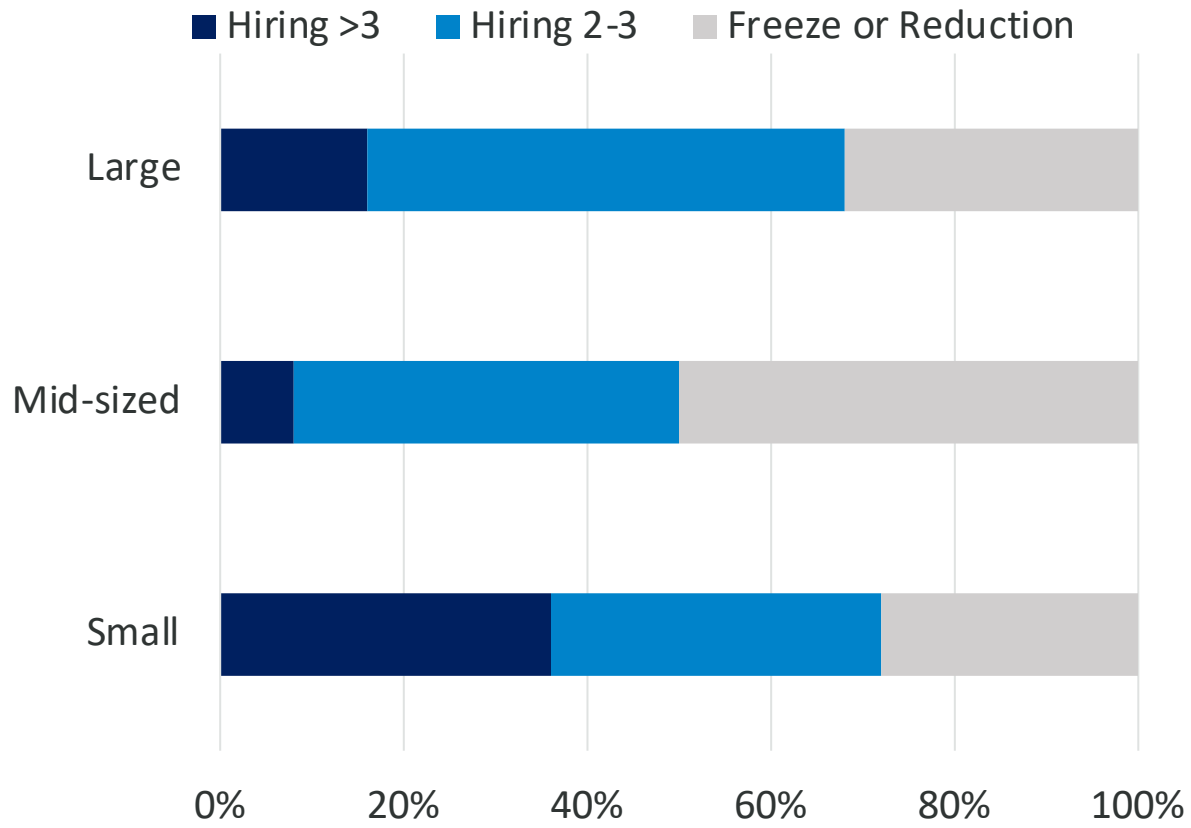
# Staffing by region



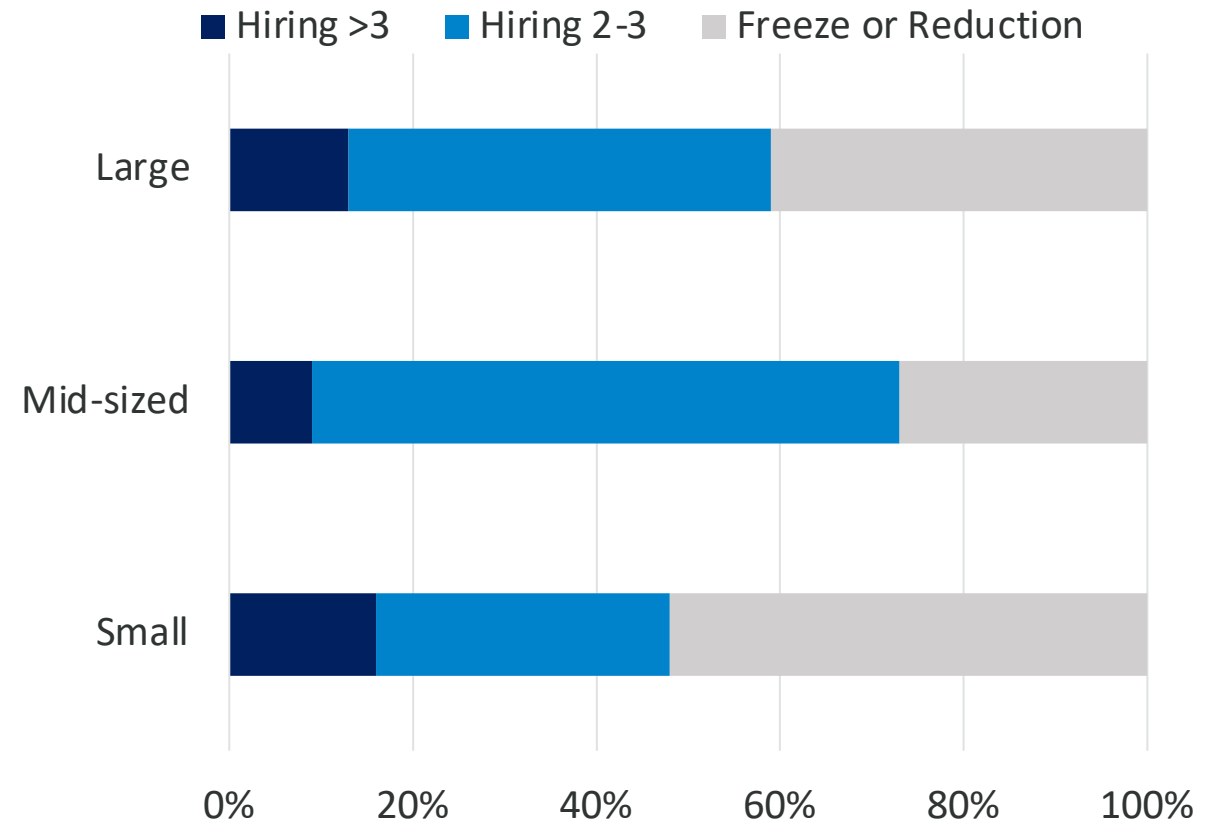
Source: *The 2023 Technology Transfer Staffing Survey*, Wellspring Worldwide Inc

# Size of institution and home city matters

## By size of campus



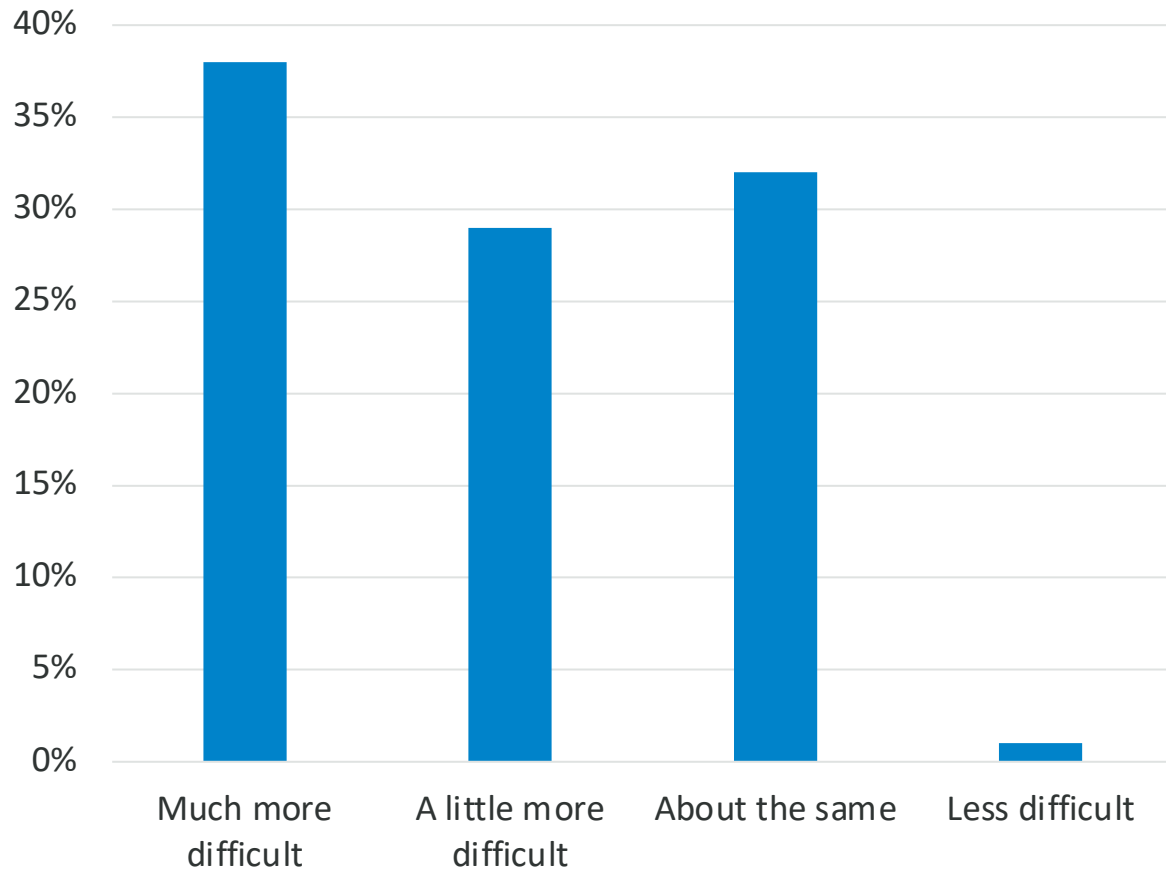
## By size of city



Source: *The 2023 Technology Transfer Staffing Survey*, Wellspring Worldwide Inc

# Staffing Challenges Abound

## How difficult has staffing been over the past year compared to prior years?



Source: *The 2023 Technology Transfer Staffing Survey*, Wellspring Worldwide Inc  
**Wellspring**

## Differences among institutions

**41% of universities** reported “Much more difficult”

- vs. 25% across government labs and hospitals

**Universities in large metropolitan areas:**

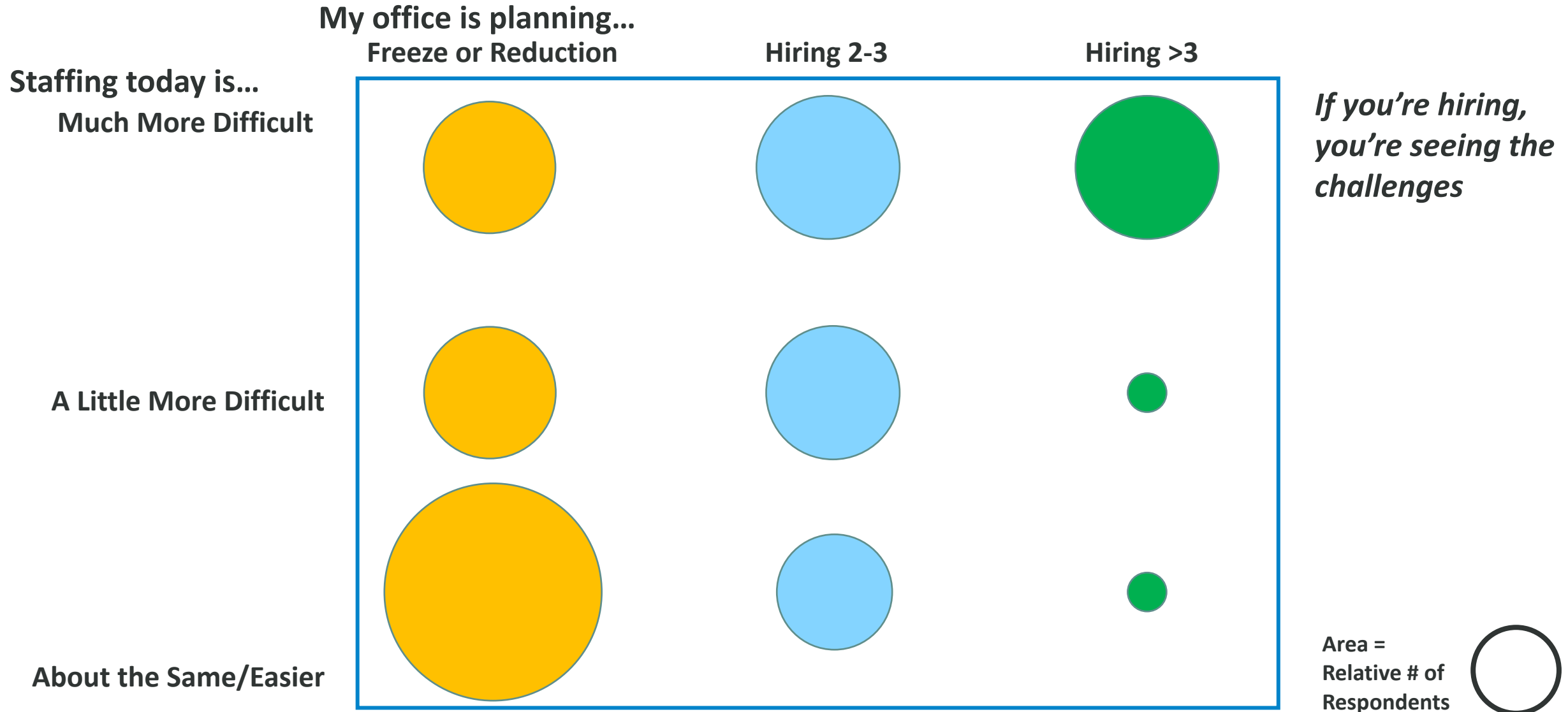
~80% of found hiring more difficult

- vs 61% across other respondents

**~30% of private institutions** are planning to hire >3 staff

- vs 11% for public institutions

# Demand to Hire vs. Perceived Challenges to Hire



Source: *The 2023 Technology Transfer Staffing Survey*, Wellspring Worldwide Inc

# Perceiving hiring challenges are most acute in certain subpopulations

## Large, Public Universities in the SE

**>45% of respondents in the SE** are at large, public institutions (vs. 24% across rest of respondents)

**50% of Large SE Public Univ.** cited staffing as “much more difficult” (vs. <33% across other large institutions)

Otherwise, student population is negatively correlated with hiring plans in regression analysis

Yet, few of the SE institutions are hiring >3 staff

## Small, Private Universities in Urban areas

**47% of private universities** reported staffing was “much more difficult” (vs 38% for public universities; 25% at hospitals/government)

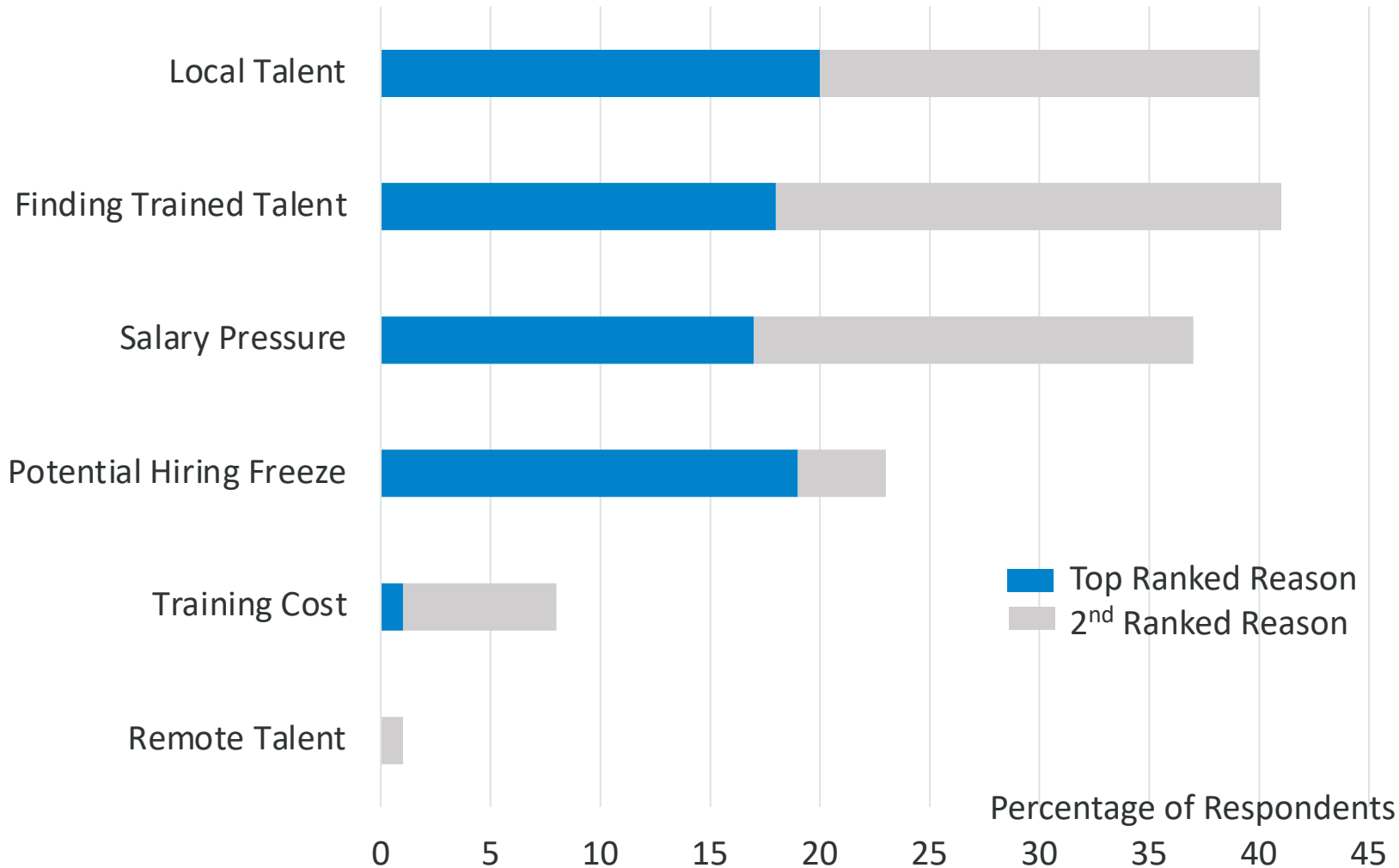
**59% of private schools** are in urban areas (city population > 750K) vs 33% of public universities

$\frac{2}{3}$  of private universities are small (<15,000) student populations

~30% of private institutions are planning to hire >3 staff vs 12% for public institutions

# The Challenge to Find Trained Talent

What are the greatest challenges to hiring today?



## Exceptions to these trends

Government labs ranked finding **anticipated hiring freeze** as 1<sup>st</sup> and identifying **trained talent** 2<sup>nd</sup>

- 71% are already in a freeze
- Response is driven by Canadian gov't respondents

Hospitals ranked **competing on salary** as the top challenge

Private universities facing staff departures were more likely to cite **hiring local talent** as their greatest challenge

...because of their location...

Source: *The 2023 Technology Transfer Staffing Survey*, Wellspring Worldwide Inc

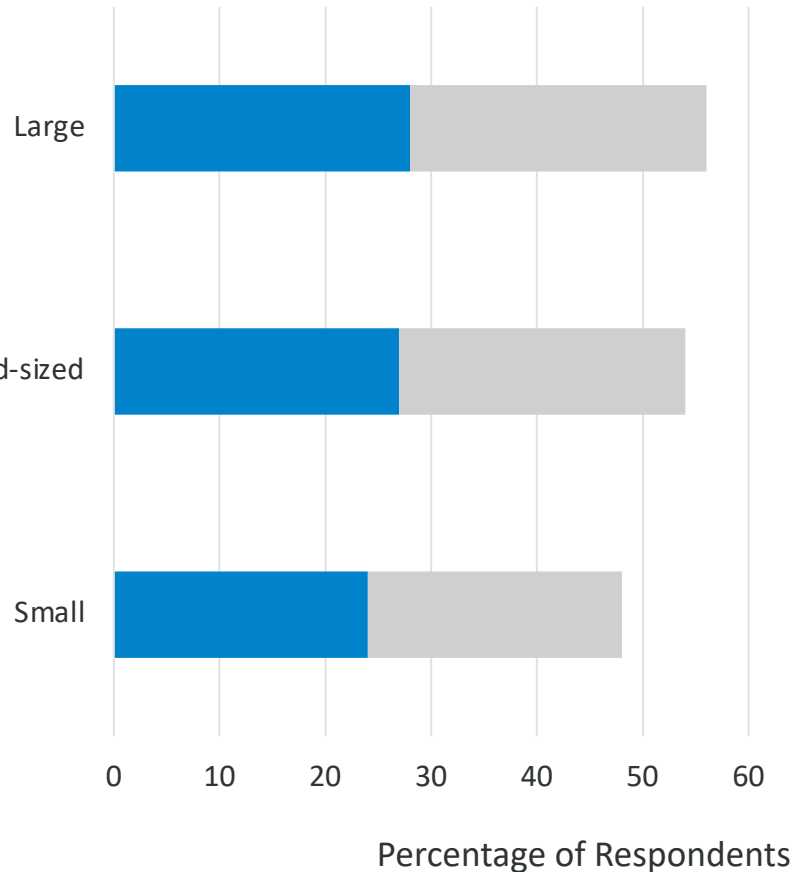
**Wellspring**

© 2023 Wellspring Worldwide Inc.

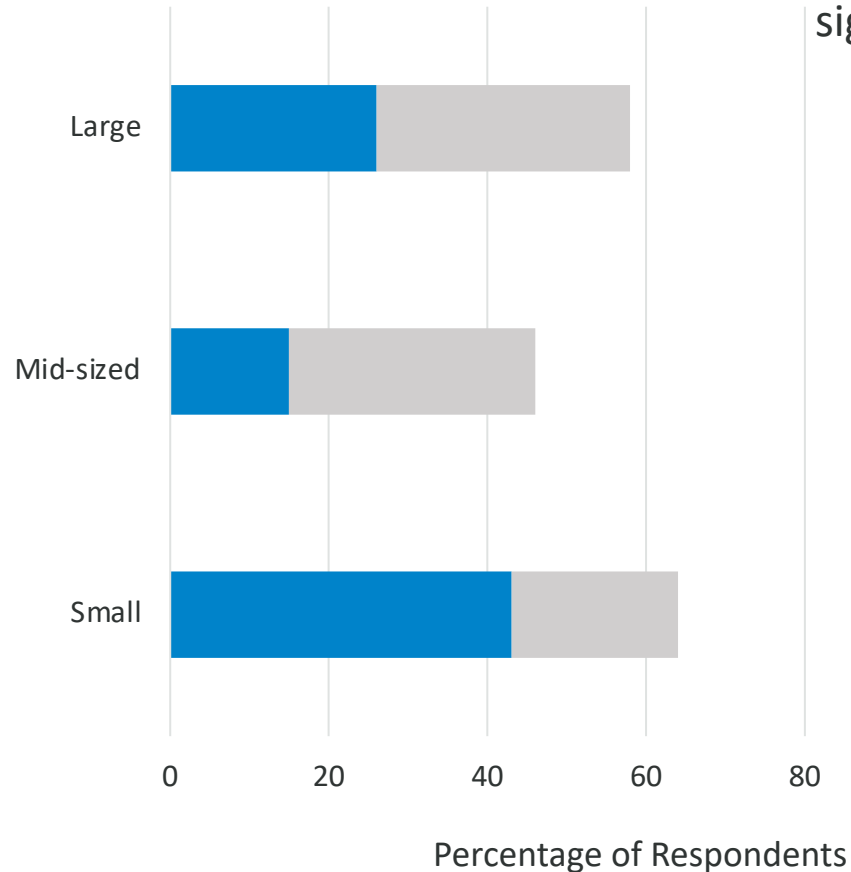
# The Snowglobe Effect: Talent gap drivers

“Local talent is the first or second greatest challenge”

By size of city



By size of institution



In regression analysis, identifying local talent as the top challenge is statistically significant for university TTO's

- located in large, urban environments
- in the Midwest and Southeast





## Heard on the street

**“Hiring full-time staff is much harder in our city. We compete with 4 other institutions for the same set of experienced people.”**

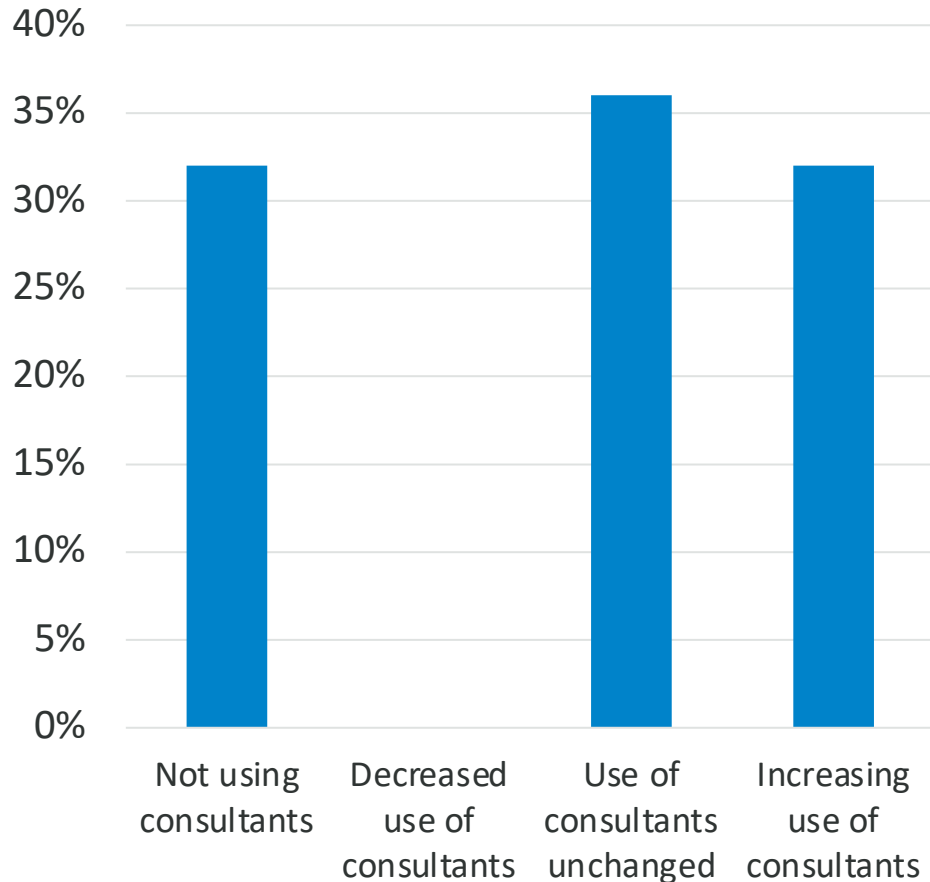
- Large, public university in major city

**“Hiring in [city] is very difficult in a small university town. We embrace hiring remote workers and consultants, and they’re equally valuable as if they’re in the office.”**

- Private university in small town

# Offices leverage consultants to fill gaps and supplement hiring

Have you used consultants in past year?



**66% of universities vs. 56% of hospitals** leverage consultants

- Fractional consultants vs. full-time staff with benefits
- 100% of government respondents use consultants

**69% of institutions in a hiring freeze are using consultants;** 30% plan to increase their use of consulting staff this year

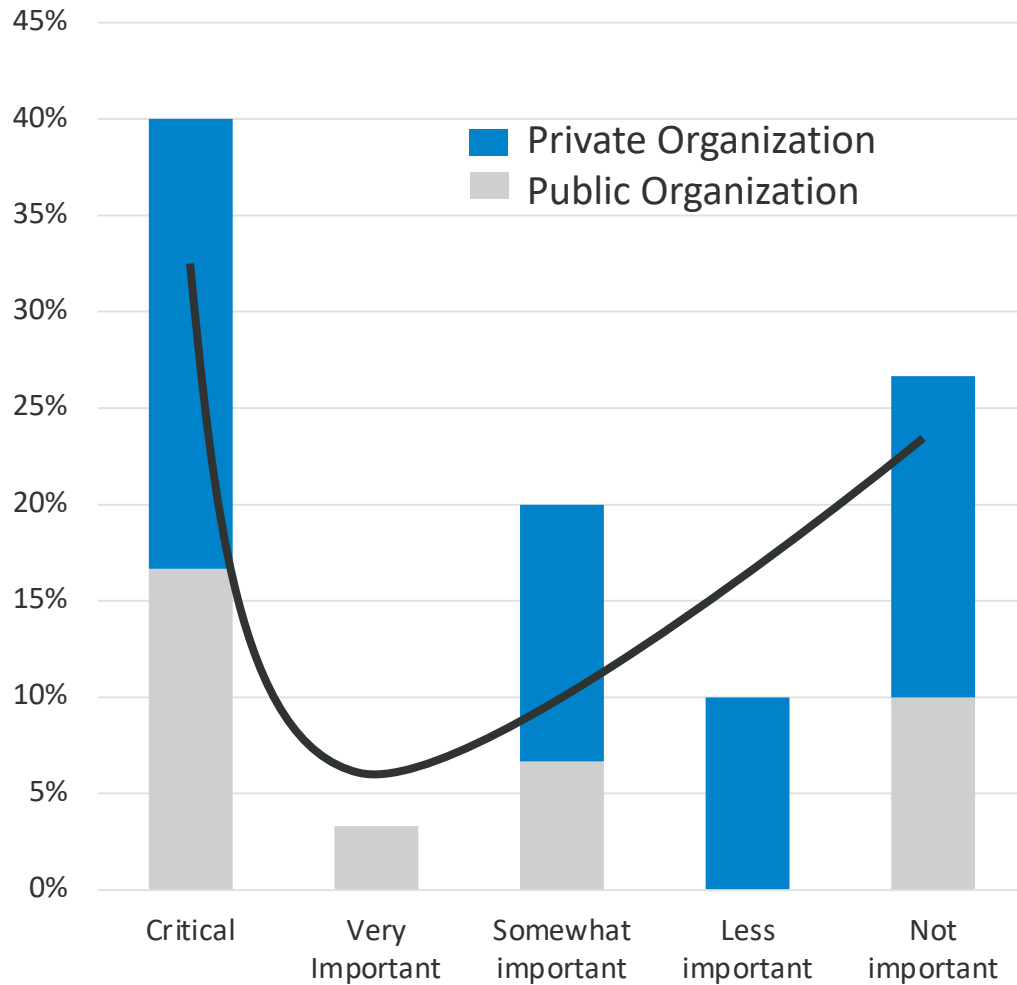
**60% of institutions hiring >3 staff will supplement with consultants, 2/3 of which will increase consulting leverage this year**

**Opportunity Zone: Only 25% of Midwest universities use consultants, but 100% reported hiring challenges**

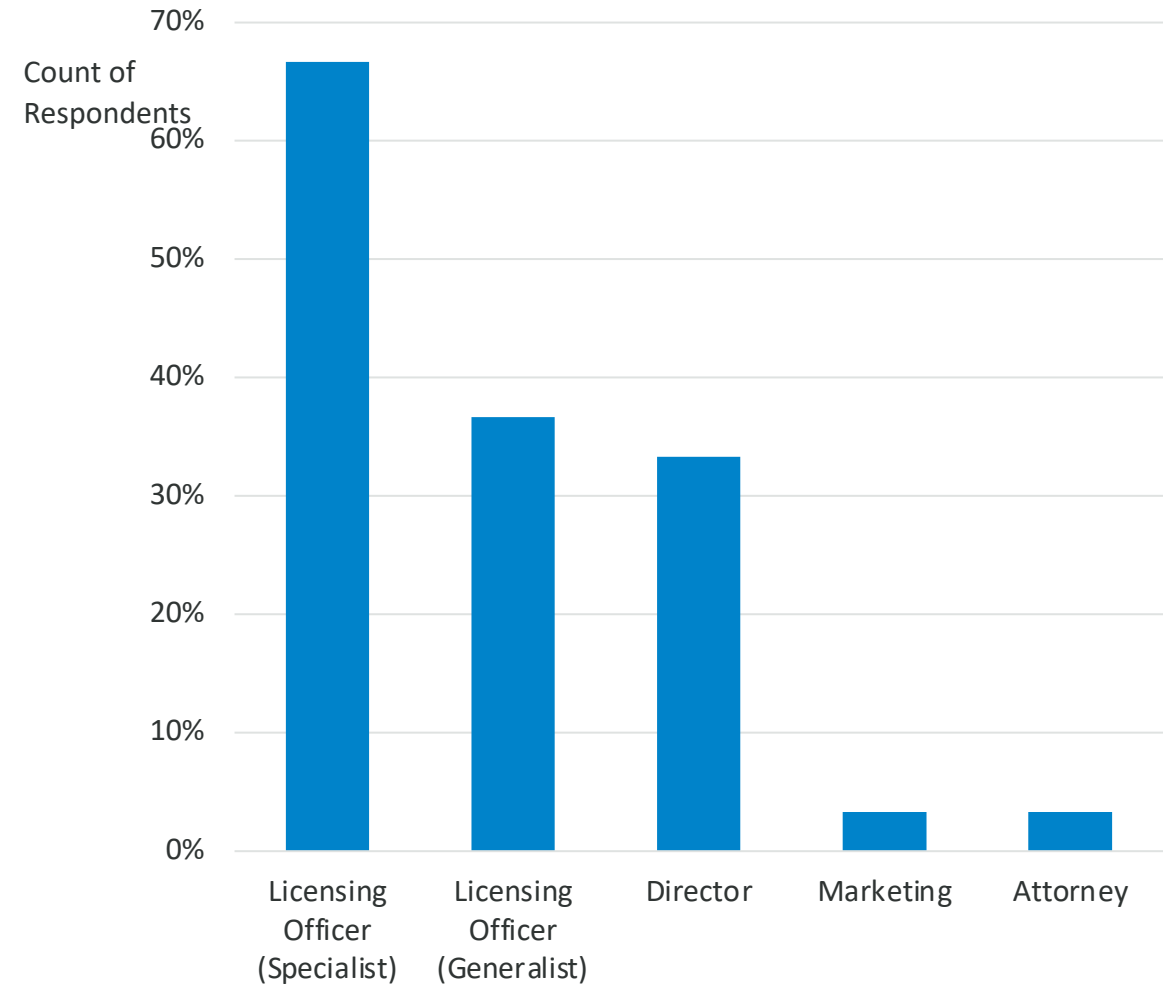
# Facing staff shortages, how do we engage with researchers?

# Meeting with researchers...

## How important is meeting researchers in person?

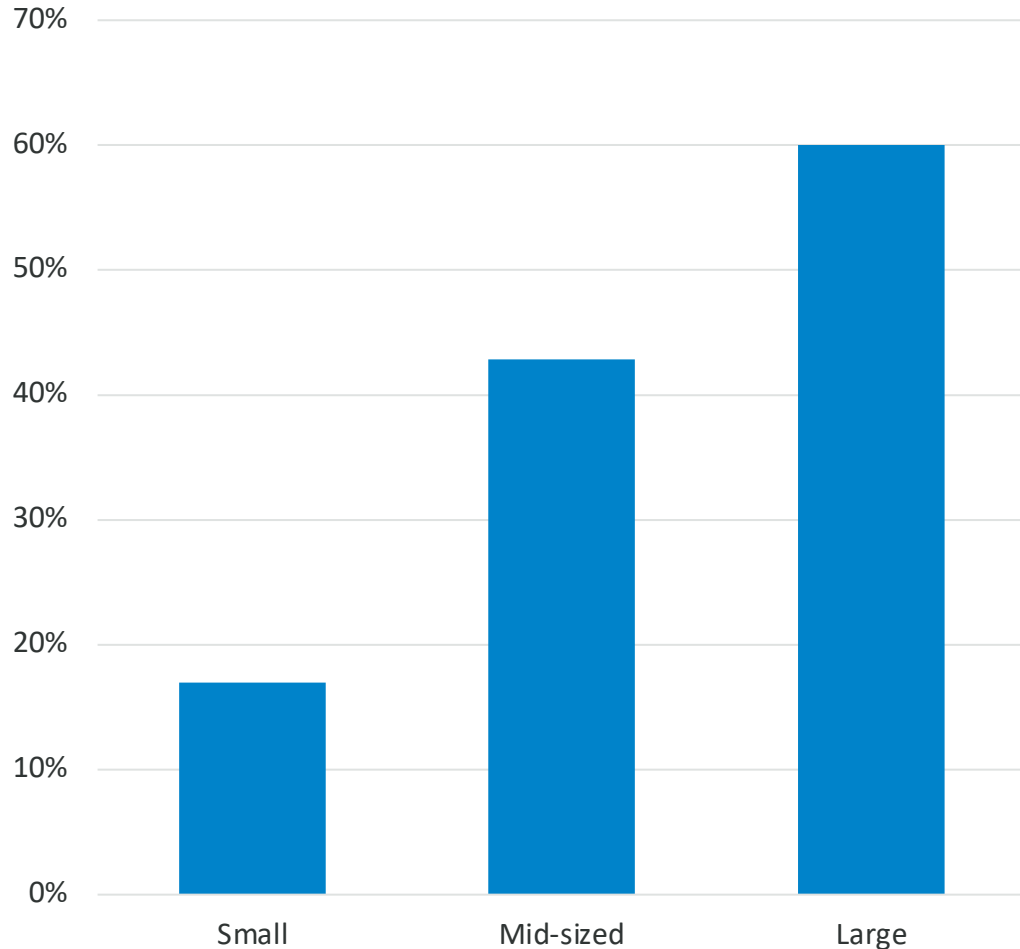


## Who should be in that meeting?



# Our institutional resources impact our perceptions

By institution size: a licensing officer with domain expertise is critical for the meeting



“A generalist licensing officer is sufficient...”

- 64% also said meeting **in person** was “Less Important” or “Unimportant”

“A specialist licensing officer is necessary...”

- Average respondent also said meeting in person was “Critical”.
- 100% of private universities

# Summary and Looking ahead to 2023-2024

## The Economics are Changing

- **Greater Demand:** Companies are ramping up their innovation programs, with specific focus on fostering university collaborations
- **Constraints in office labor supply:** TTO's saw sustained growth in activities
  - Office staff remained relatively flat over the past 3 years
  - TTO's are experiencing unprecedented staff departures
  - Replacing departures with trained staff far exceeds other challenges

## The New Equilibrium

- 67% of respondents leverage consultants; ~70% among those in a hiring freeze
- Majority of offices hiring staff are also increasing use of consultants
- 1/3 of respondents said "Generalists can meet with faculty"
- Resource-constrained offices find in-person faculty meetings are "less or not important" now

## What Directors Are Saying

**“My model now is to leverage the same company for software and staff augmentation so its an end-to-end solution.”**

**- Small office in large public university**

**“With a new office, I am not going to hire up a full staff. I need a small number of core employees and then will leverage outside consulting.”**

**- Hospital System, 3-time director**

**“Hiring in [city] is very difficult in a small university town. We embrace hiring remote workers and consultants, and they’re equally valuable as if they’re in the office.”**

**- Mid-sized office in private university**

# Wellspring's Office as a Service

## Services

### Daily Operations

Disclosure Evaluation  
Patent Docketing  
Contract Review and Entry  
Payables and Invoicing  
Compliance Reporting

### Strategic

License Negotiation  
Process Review  
KPI's and Reporting  
SOP Documentation

Office Benchmarking  
Regional Analysis

**Staffed by former tech transfer managers + Ph.D. scientists**

**Efficiencies enabled by enhanced software in Scout and Sophia**

- Simple Add-on to Wellspring license and support contract



# Thank you

---

[rob.lowe@wellspring.com](mailto:rob.lowe@wellspring.com)