CYBER THREAT INTELLIGENCE
Summit & Training

SANS DFIR

Is Sharing Caring?

A Deeply Human Study on CTI Networking

January 28, 2022 | 2:55 PM ET

Grace Chi | Cofounder & COO @ Pulsedive

Hi there

Grace Chi, Cofounder, Pulsedive

Front row seats to CTI teams

Bob Ross the weatherman sent me

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"[CTI Networking] is an untapped area for a lot of organizations… they are still very siloed when it comes to intelligence sharing."

"We need better ways to share threat intelligence – safely"

"Cross-[insert here] collaboration is essential!"

"We'll never get to our necessary level of threat intelligence awareness, landscaping, and forecasting capabilities if we're always running around with our heads cut off AND our hands tied behind our back"

So… what's going on?

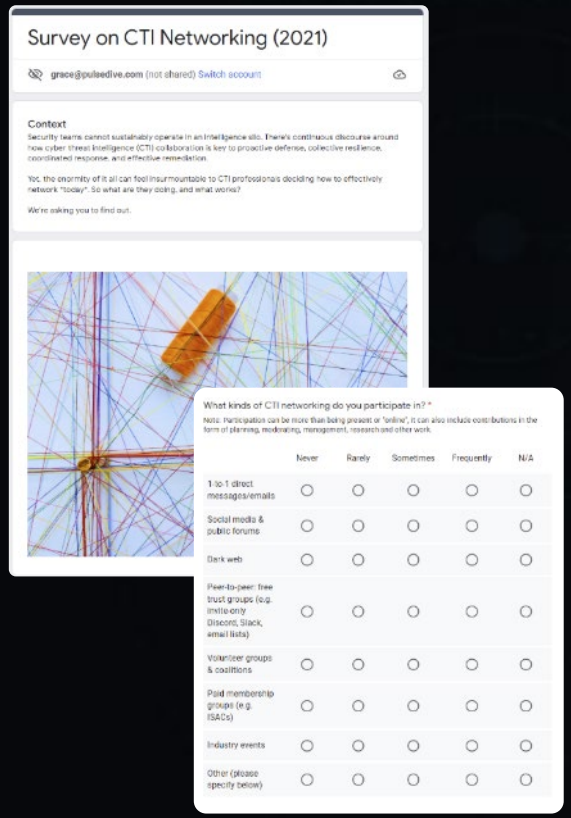
Benchmark CTI networking practices, results, and attitudes to provide data-based insights around:

How different methods stack up

How and why individuals participate

The role organizations play

We reached out directly



Google Form survey + interviews

No PII, no compensation

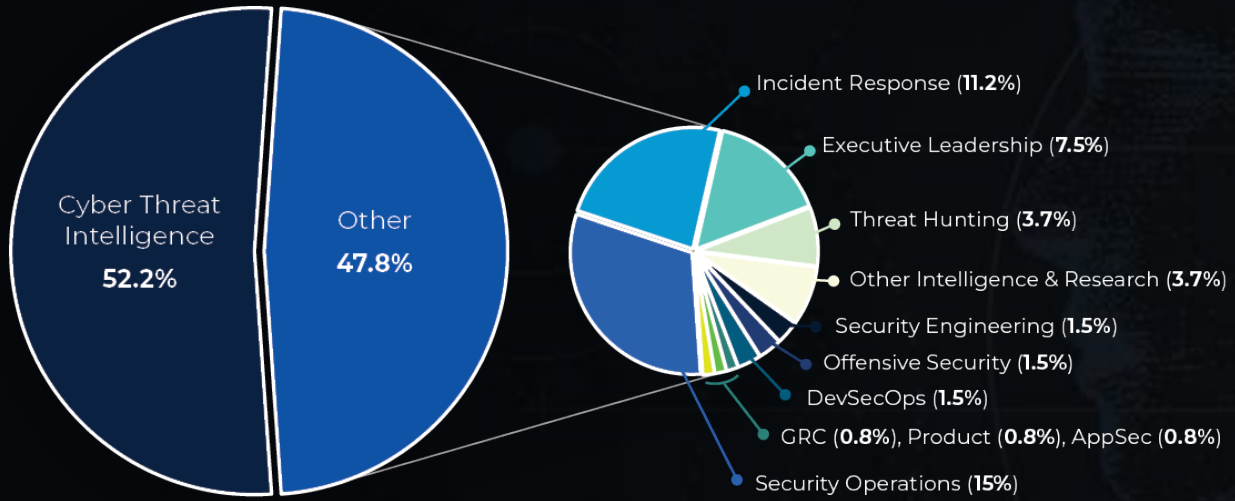
Distributed through word of mouth

134 quantitative, 120 qualitative responses

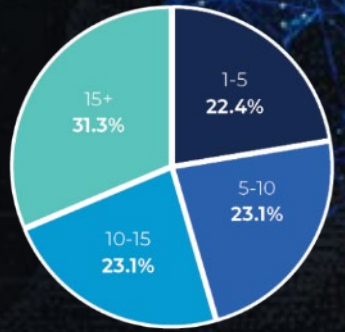
THANK YOU!

DEMOGRAPHICS

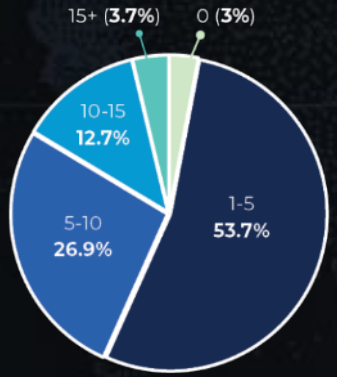
A representative spread of job functions and experience



PRIMARY JOB FUNCTION

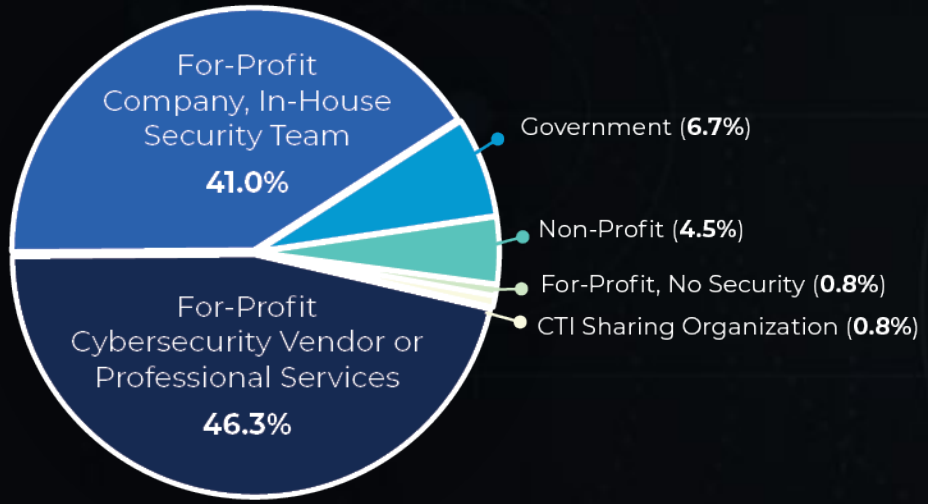


WORK EXPERIENCE

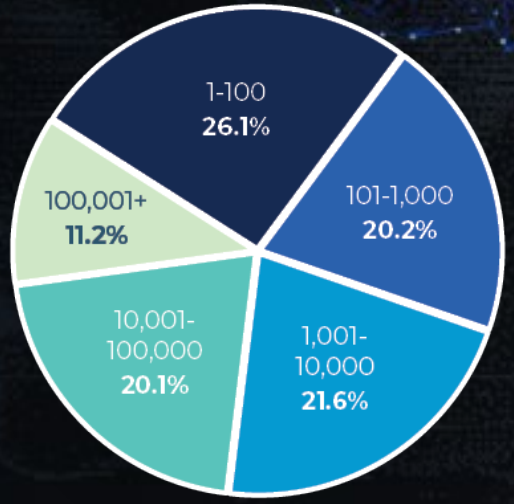


CTI EXPERIENCE

Overwhelmingly for-profit, across all organization sizes

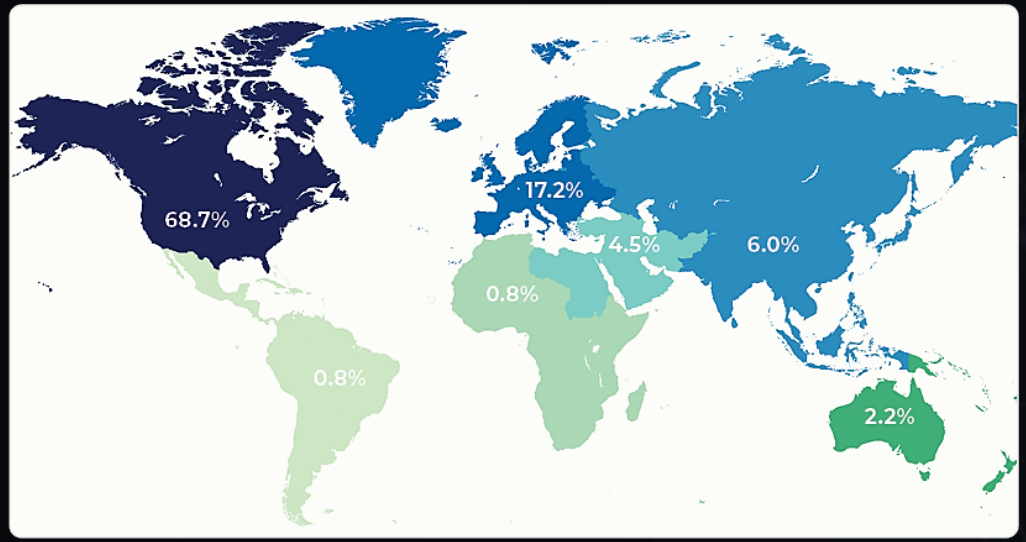


EMPLOYER TYPE



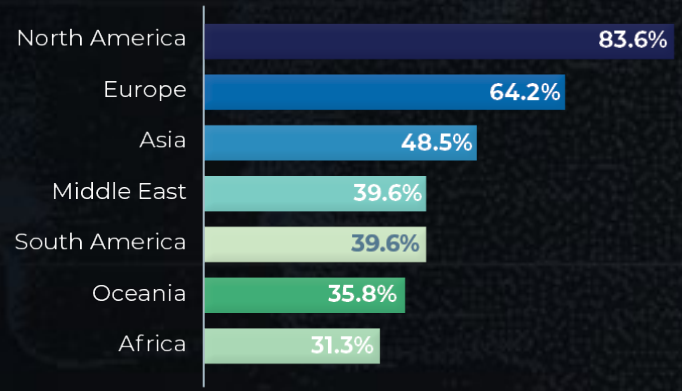
EMPLOYER SIZE

Majority NA-based, with international operations



LOCATION

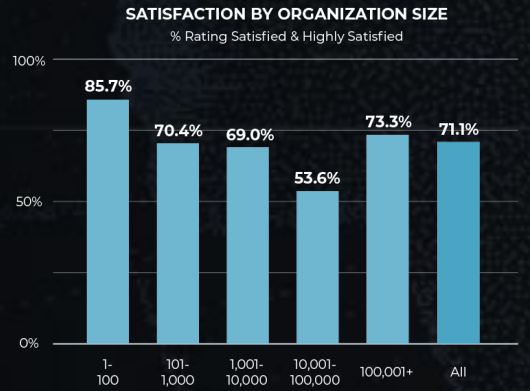
REGIONS OF OPERATIONS



When your respondents are
REALLY enjoying what they do....

When your respondents REALLY enjoy what they do....

So much that you can't create segments



INSIGHTS

How Different Methods Stack Up

How different methods stack up

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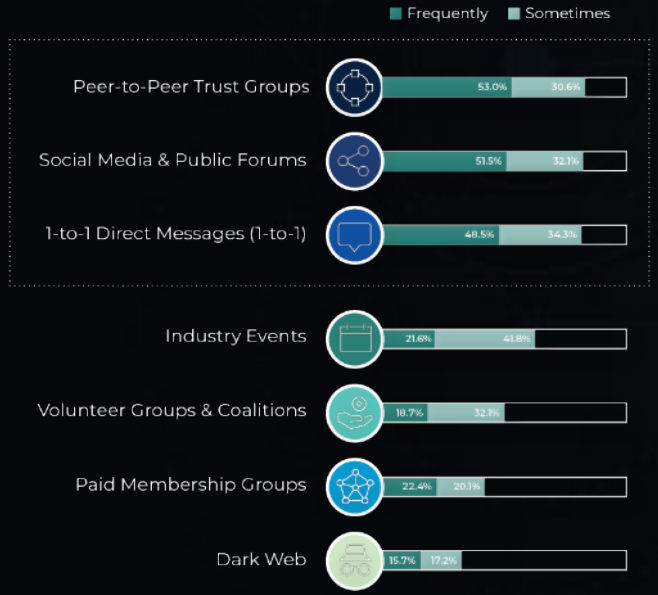
PARTICIPATION



QUALITY

WHAT METHODS ARE...

Valuable?

- 1-to-1 Direct Messages
- Peer-to-Peer Trust Groups
- Social Media & Public Forums

High Confidence?

- 1-to-1 Direct Messages
- Peer-to-Peer Trust Groups
- Paid Membership Groups

Timely?

- Social Media & Public Forums
- Peer-to-Peer Trust Groups
- 1-to-1 Direct Messages

Actionable?

- 1-to-1 Direct Messages
- Peer-to-Peer Trust Groups
- Social Media & Public Forums

Unique?

- 1-to-1 Direct Messages
- Dark Web
- Peer-to-Peer Trust Groups

RESULTS

WHAT METHODS...

Helped detect or prevent an attack?

- 1-to-1 Direct Messages
- Peer-to-Peer Trust Groups
- Social Media & Public Forums

Provided value during an attack?

- 1-to-1 Direct Messages
- Peer-to-Peer Trust Groups
- Social Media & Public Forums

Contributed to remediation or post-incident analysis?

- Peer-to-Peer Trust Groups
- 1-to-1 Direct Messages
- Social Media & Public Forums

1-to-1 & Trust Groups reign supreme (by far)

No shortcuts to the best peer-to-peer networks

Dominant across all dimensions

Private, personal reputation, reciprocal contribution

1-to-1
100% participation by employees of 100K+ orgs
46% increase by professionals with 10+ years exp compared to <10

Trust Groups
Top 2 across all dimensions of quality except uniqueness
10+ years and CTI professionals ranked Trust Groups even more positively

> “I have found that collaboration platforms such as Slack or Discord are the best to share IOCs and TTPs that can have an **immediate impact** on investigation and threat hunts.”

But don't underestimate Social Media

Noisy. Chaotic. But popular.

Outperformed on impact

Great for short-term discovery and longer-term network building

Safety & strict curation

Social
Ranked top in timeliness and low in confidence
One unique respondent

> "Being linked with [research] in the past an individual... reached out via social media and notified me of an additional set of [malicious research findings] that were still active... I was able to help escalate that internally... and get them **taken down within 24 hours**."

> "Met a random guy on twitter that was doing some CTI work on a similar data set that I was working on. I asked him questions around the dataset and how he was parsing the data... I made improvements... we both ended up with the **data we needed to provide to our CTI teams**."

INSIGHTS

How and Why Individuals Network

How and why individuals participate

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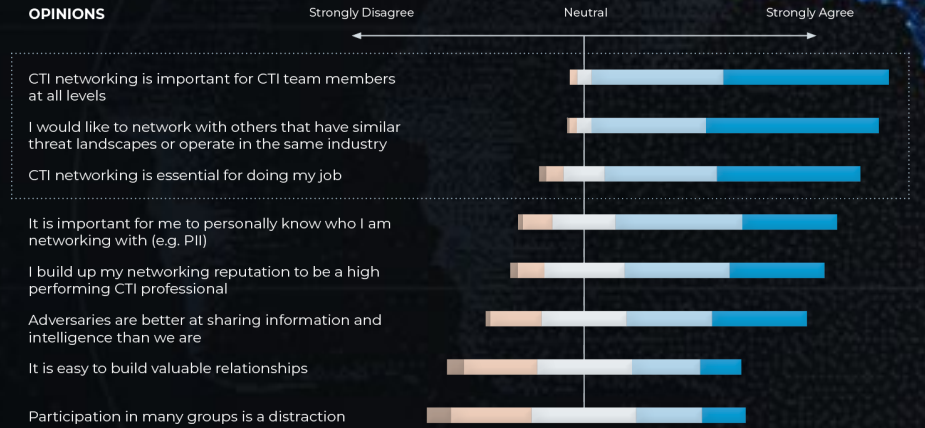
WHAT ARE THE RESULTS OF YOUR NETWORKING EFFORTS?

Networking in CTI has helped me...

OPINIONS



CTI networking for action and awareness

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87% Get valuable threat data

85% Stay aware of what's happening strategically

84% Take proactive measures

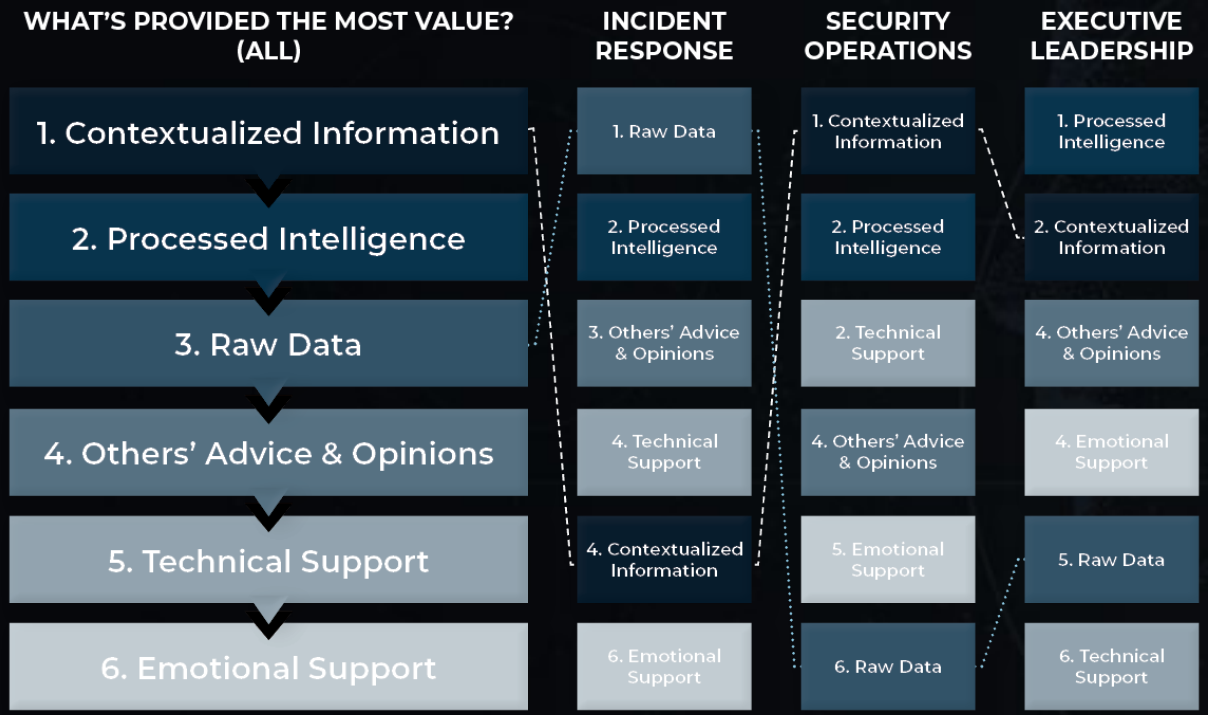
81% Find, vet, or understand new sources & methods

"There have… been multiple times where simply understanding the scope of some activity, quickly and via the input from trusted individuals, has **directly led to detecting and mitigating malicious activity**."

"During the [redacted APT] breach… We didn't realize it was [redacted APT] until [reaching out to Trust Groups] **helped connect the dots for us**. That made a MAJOR change in the investigation and helped kick our IR into gear… the event was over 3,000 human work hours. Much of what we did for remediation was based on **what we learned in speaking to others**."

"**[Building] a bigger picture** due to multiple vantage points of threat actors… We've been able to confirm overlap [with trusted CTI parties] and assess their collection and analysis methodologies that matched ours and use that to build a more complete picture."

But what's valued? Depends who you ask.



Plus

Those with the least (<5) and most (15+) years experience valued advice more highly

The smaller the organization, the more value is placed on raw data

The larger the org, the more value on advice & opinions

Highly recommended for all levels

An unexpected barrier: fear

Loads of advice & encouragement

> "Do not be afraid to bring new ideas to the table. I think we are afraid of **being wrong or looking incompetent**."
>
> Discussing new ideas, brainstorming, and sharing only **makes us stronger**."

Advice by and for the CTI Community

PARTICIPATE

"Start small" "Share what you can"

"Have both human (coffee, calls) and automated (IOC sharing) interactions"

"Don't let impostor syndrome stop you from engaging"

"Get involved in a good community"

"Find and follow on social media those interested/working in your target areas"

BUILD TRUST

"Be active, develop trust" "Don't burn trust. Ever."

"Get into top circles by contributing your own intel, don't just regurgitate"

"Make sure your critical thinking and conclusions are based on sound principles!!!!"

"Provide value with a niche you're experienced in"

"Hold yourself to the highest professional standards"

AND ALWAYS STAY CAREFUL AND STRATEGIC.

"Understand what your organization needs."

"Be clear on use cases and intelligence requirements"

"Have a collection plan that includes sharing"

"Operationalize your efforts - data on the floor is useless"

"Trust, but verify" "Ensure who you network with is vetted"

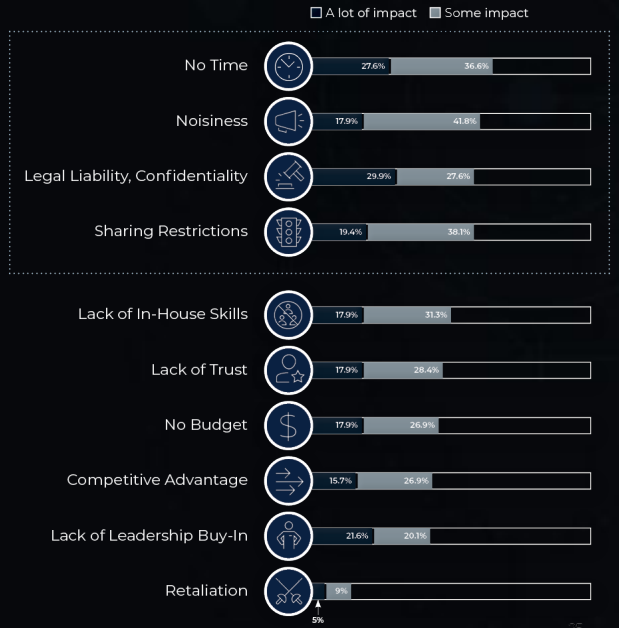
"Be skeptical with data shared, but also be generous to those that share as it can take quite a bit of courage and can often be novel"

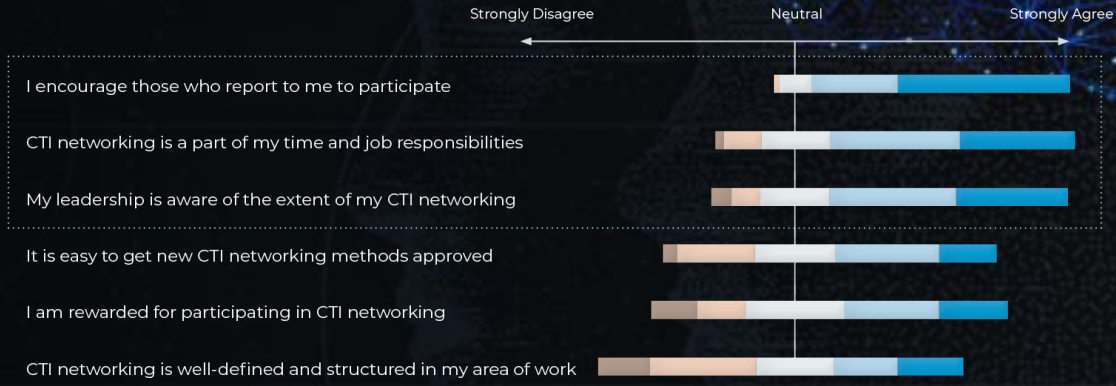
"Select trust groups based on impact" "If you're struggling to find value early, move on"

INSIGHTS

The Role Organizations Play

The role organizations play





TLP White: there's never enough time!

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86%
Spend at least an hour every week networking

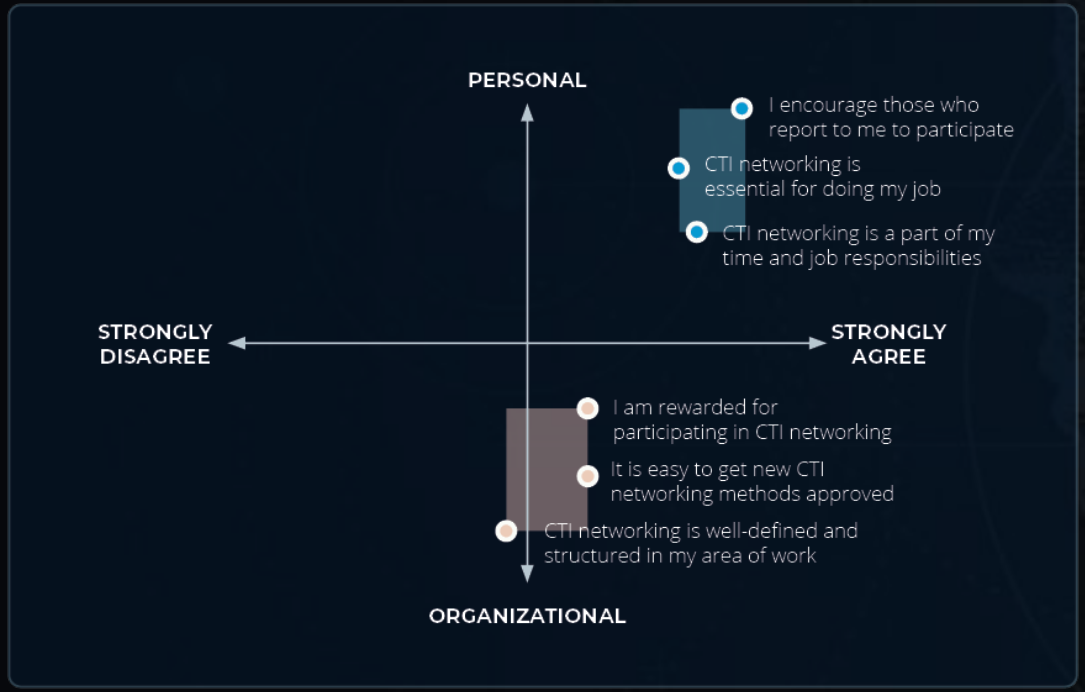
61%
Have some or highly standardized processes

25%
Measure or report on effectiveness of efforts

TOP CHALLENGES

- No Time
- Noisiness
- Legal Liability, Confidentiality
- Sharing Restrictions

There's room for development at organizations



> "We are currently [CTI networking] on an ad-hoc approach… Would like to have this **as part of our long-term strategy** to mature our CTI processes as a whole…"

> "[W]orking in the CTI space, having the support of leadership to reach out to other organizations or individuals in my network or another's network would have **been the best thing possible**."

CONCLUSION

Where do we go from here?

What we found

How different methods stack up

Crowd favorites, DMs & Trust Groups, take the cake.

Social clinches third.

How and why individuals participate

Data? Information? Intel? All of the above.

Not a matter of *if* you should, but *how*.

The role organizations play

For now, it's on you.

It's time to acknowledge the impact CTI networking is already making.

The end of the beginning

Larger Survey

In- and Ex-clusionary Culture

Guidance By Career Levels

Company Case Studies

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IS SHARING CARING?
A report on current cyber threat intelligence networking practices, results, and attitudes

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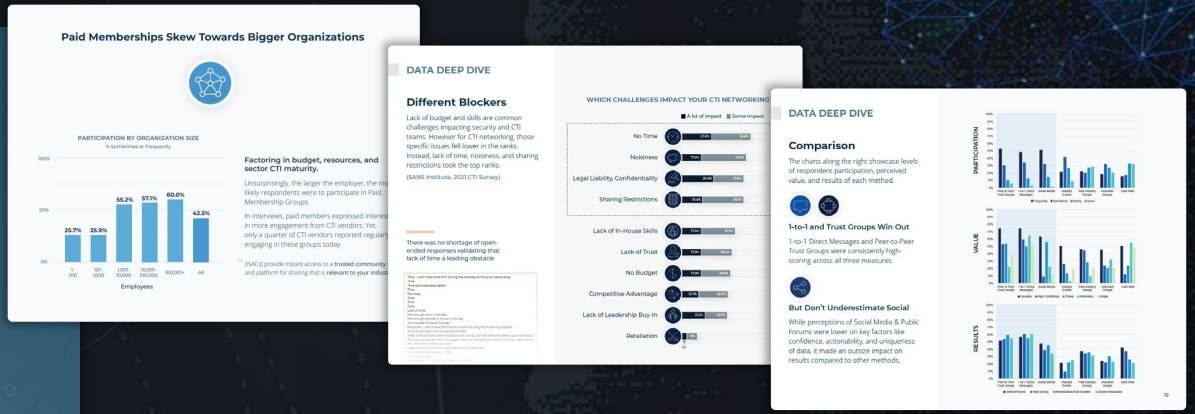

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