



STKI Staffing Ratio Research

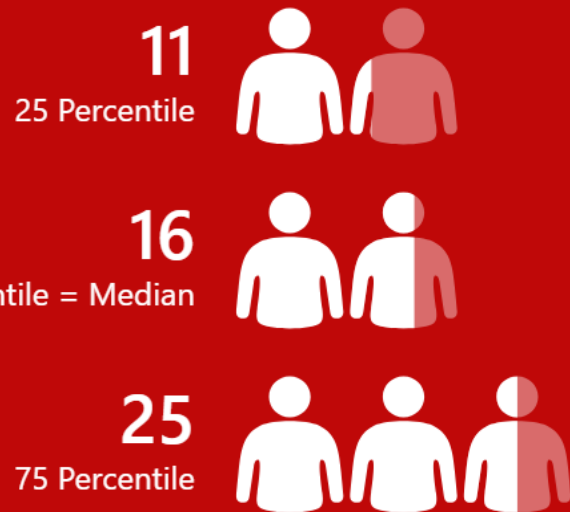
In Enterprises IT
Infrastructure – Cyber – Operations

STKI Staffing Ratios Research ToC

- 👤 Employees per IT staff member
- 👤 Infra-Cyber-Ops general metrics
- 👤 Infra-Cyber-Ops PMO
- 👤 Cyber
- 👤 Permissions
- 👤 Observability (monitoring)
- 👤 Storage
- 👤 System (Windows, Linux, VDI-TS)
- 👤 NOC-ITOC
- 👤 Help Desk and PC
- 👤 DBA
- 👤 Network and Net-Sec
- 👤 Containers
- 👤 DevOps
- 👤 Public Cloud
- 👤 SAP Basis
- 👤 Demographics
- 👤 *Methodology - research explanations*

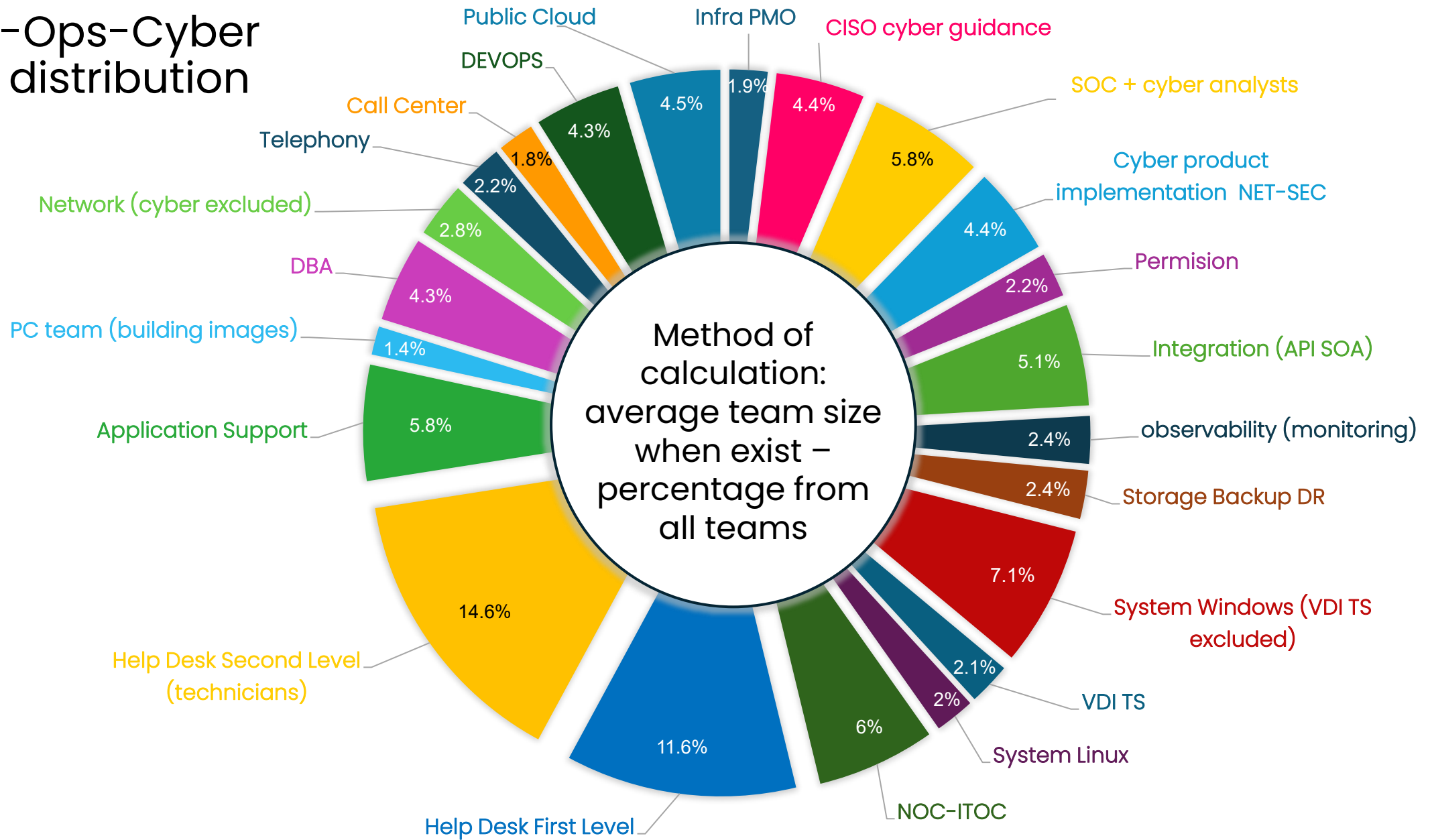
Number of company **employees** (using computers) per **IT staff member**

Source : STKI Research



This does not include “partners” like external doctors in Health, insurance agents in Insurance, etc.

Infra-Ops-Cyber staff distribution



Percent of **Infra-Cyber-Ops** from total **IT employees**

Source : STKI Research

22%
25 Percentile



25%
50 Percentile = Median

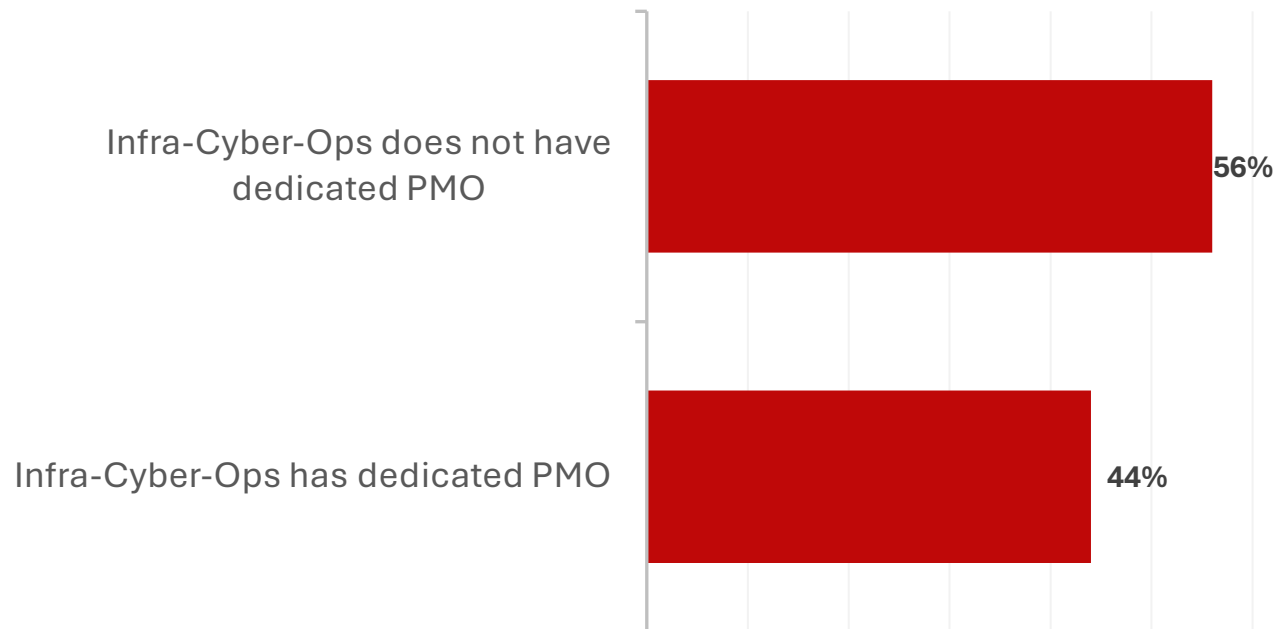


35%
75 Percentile



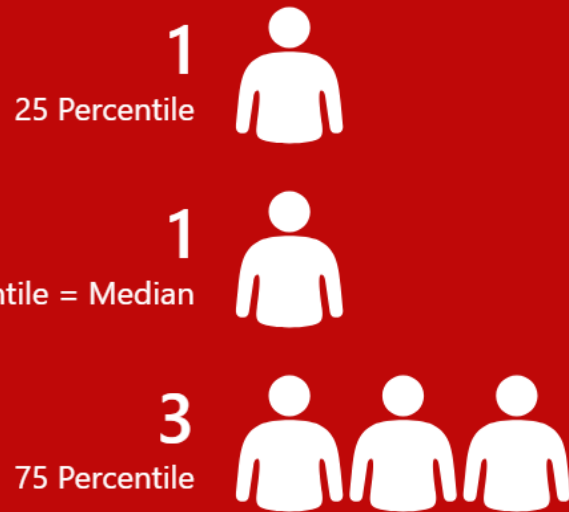
- Totals not including telephony call center , application support , software infrastructure (document management, forms, etc.), HATMAA, HPC, infra procurement,
- SIEM soc might be outsourced (fully or partly)

Does Infra-Ops-Cyber has dedicated PMO services?

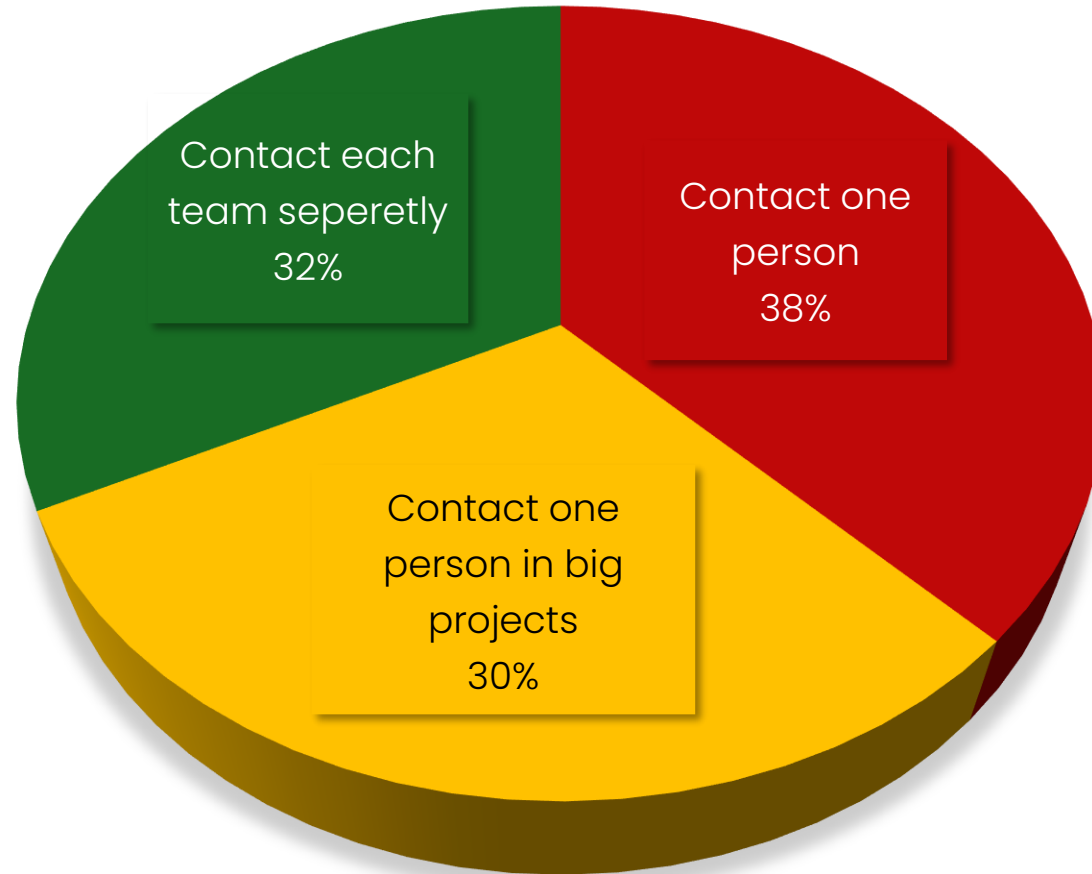


Number of dedicated **infra-ops-cyber PMO's** (when exist)

Source : STKI Research



How development (products projects) **contact** the **infra-cyber teams**?



“One contact” for infra-cyber projects is essential for improving the satisfaction of infra-cyber-ops services

Cyber budget from total IT budget in Israeli Enterprises

Source : STKI Research

6%
25 Percentile



10%
50 Percentile = Median



17%
75 Percentile

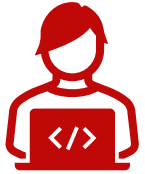


“Cyber” is defined differently - example - some CIOs consider patches to be part of cyber security, while others may not consider it to be part of cyber security

Sometimes cyber activities are funded by “regulations”

Organizations Increase their cyber budget over the years

Cyber security “personas” :



Guidance (CISO)
Budget, priorities, regulations and certifications, PT



Secure
development



SOC
SOC, Security analyst + Incident response
 (“money time”). SOC is big and might be
outsourced



Other – Cyber awareness,
permission team, etc.

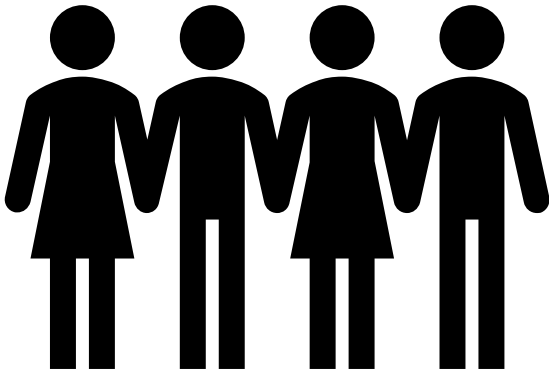


Cyber products (implementing the cyber
products)

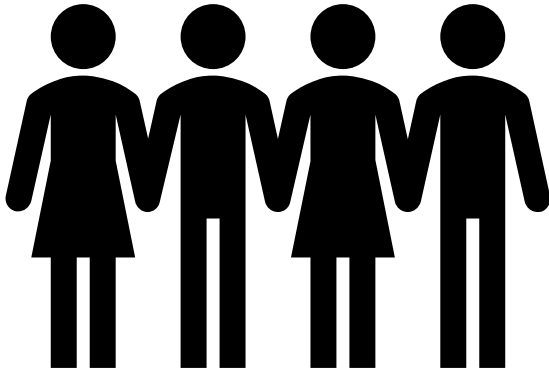


IT controller (who controls the CISO?)
conducting a different set of PT’s

The big divide



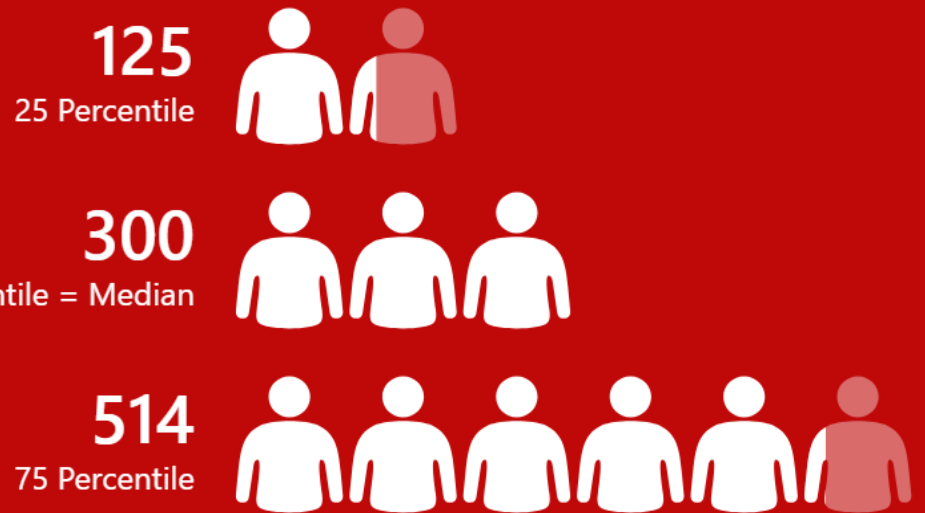
regulated / finance organizations



not regulated organizations

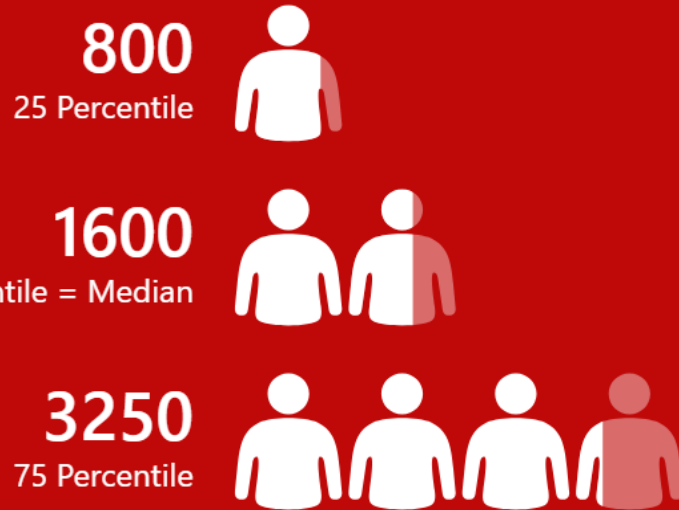
Number of **Employees** (using computers) per **guidance department (CISO)** staff member in **regulated / finance** organizations

Source : STKI Research



Number of **Employees** (using computers) per **guidance department (CISO)** staff member organizations **not regulated**

Source : STKI Research



SIEM/SOC staffing

Source : STKI Research

11
25 Percentile



15
50 Percentile = Median



17
75 Percentile



Typically : "2-3 in a shift during day 1-2 during night + 2 managers = 14 employees "

This is why SIEM/SOC as a service is becoming popular

Sometimes : outsourced first level of SOC but analyst are internal

What about change management in outsourced SOC?

Employees (using computers) per **cyber implementation** staff member in **finance/regulated** organizations

Source : STKI Research

163
25 Percentile



226
50 Percentile = Median



466
75 Percentile



Q: "How many people implement cyber tools?"

Not all "cyber implementation" has "cyber" title. Example "40% of system is cyber related effort" so "cyber implementation" is "double booked"

Employees (using computers) per **cyber implementation** staff member (not regulated-finance)

Source : STKI Research

548
25 Percentile



700
50 Percentile = Median



1646
75 Percentile

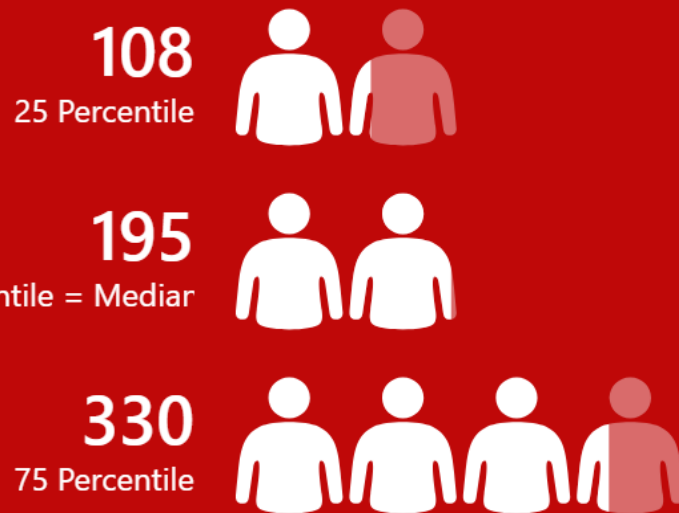


Q: "How many people implement cyber tools?"

Not all "cyber implementation" has "cyber" title. Example "40% of system is cyber related effort" so "cyber implementation" is "double booked"

Servers per cyber implementation staff member

Source : STKI Research

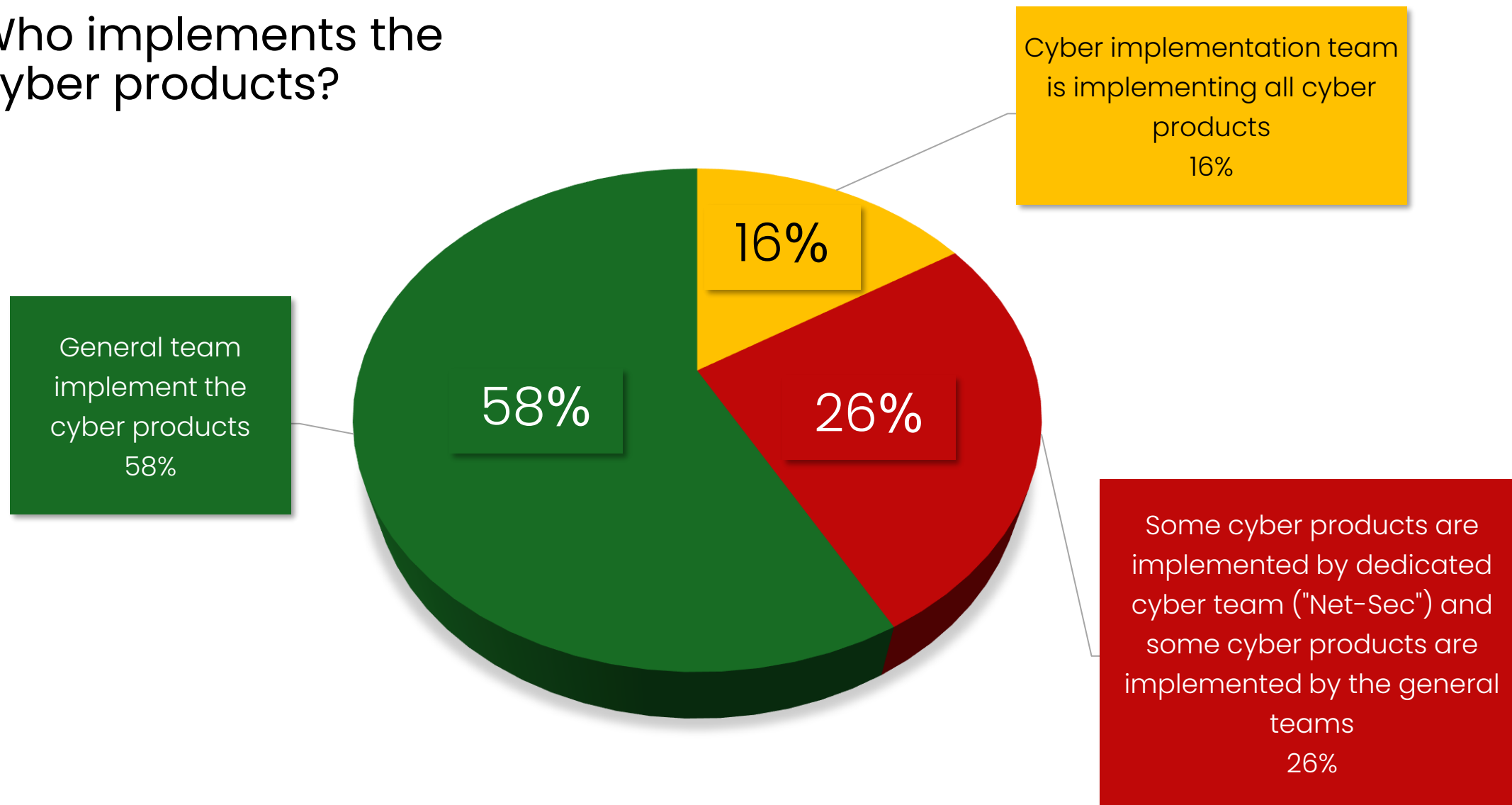


Q: "How many people implement cyber tools?"

Not all "cyber implementation" has "cyber" title. Example 40% of system is cyber related effort

All (prod+non prod) Windows+Linux servers/VMs not including legacy (MF, AS400)

Who implements the cyber products?



Employees (using PC) per **permission** staff member

Source : STKI Research

1,042

25 Percentile



1,800

50 Percentile = Median



2,708

75 Percentile

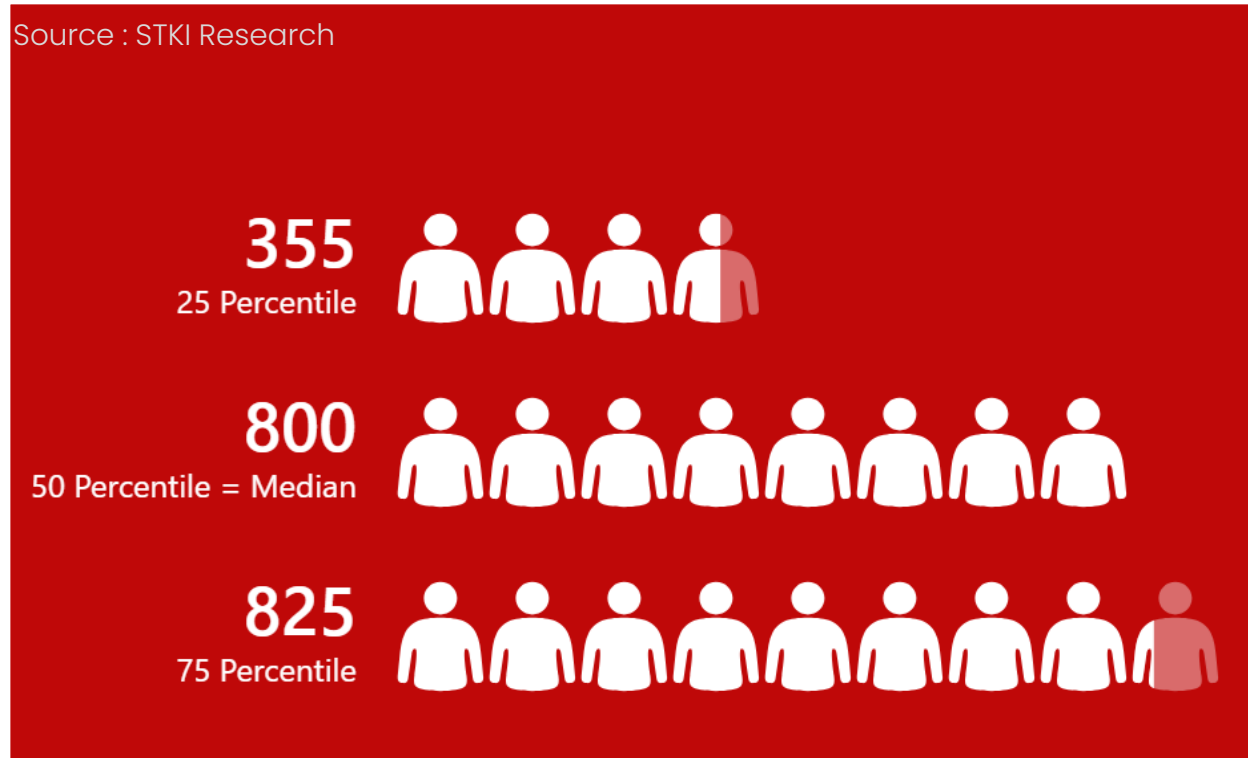


Most organizations have implemented automation in this area.

Permissions include programming the IAM tool, setting the permission rules, day to day permission work

Number of **production servers** (Windows+Linux) per **observability** (monitoring) staff member.

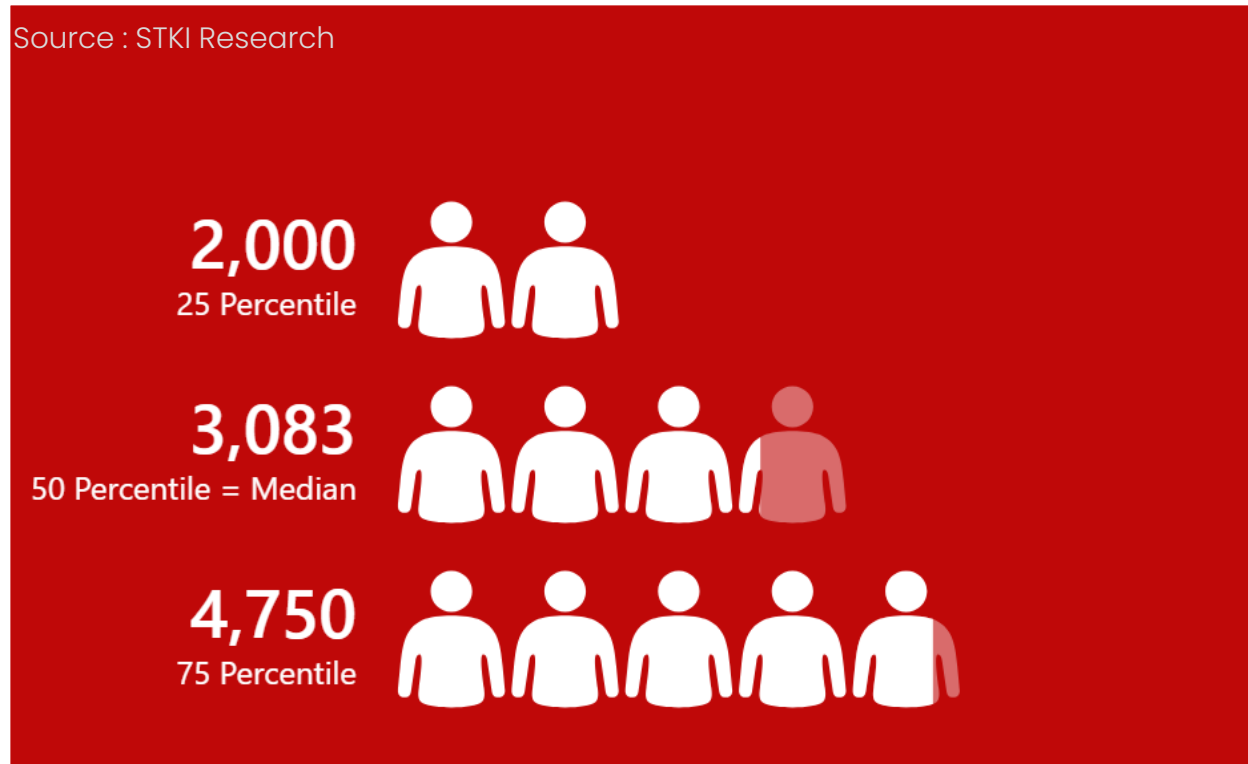
Source : STKI Research



This is for building the observability maps not for looking at the maps (NOC ITOC)
Legacy servers are not counted (AS400 MF)

Number of **CI** (configuration items) in the **observability** tools per observability staff member

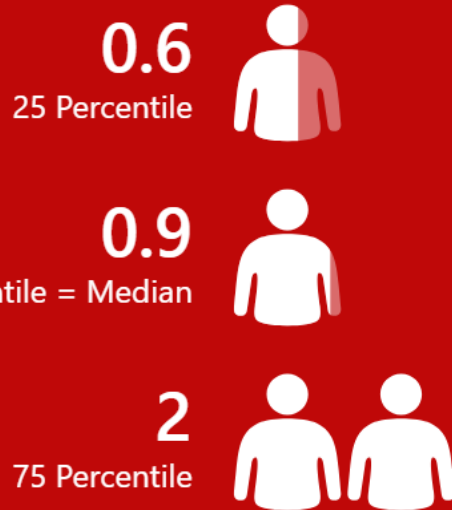
Source : STKI Research



This is for building the observability maps not for looking at the maps (NOC)

Petabyte volume usable storage per **storage** (+backup+DR) staff member

Source : STKI Research



Q: "What is the usable storage volume – storage that OS can mount/access including HCI, DR storage, etc.?"

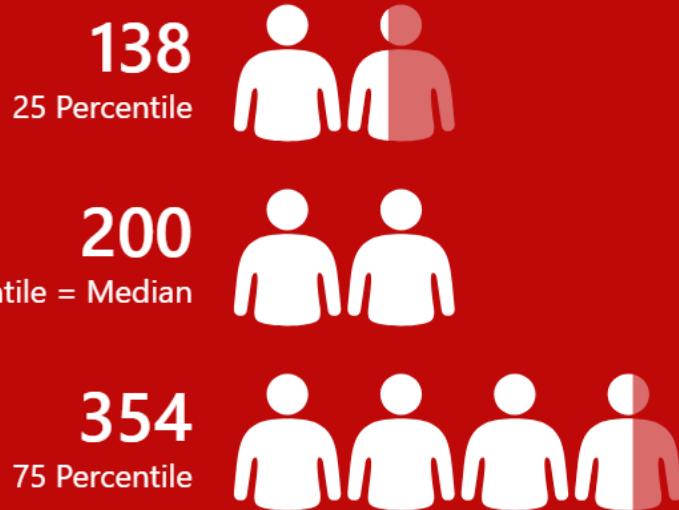
What percent from **storage** team effort is dedicated to **cyber**?

Source : STKI Research



of **Windows servers** (all:prod+dev+test) per Windows system staff member

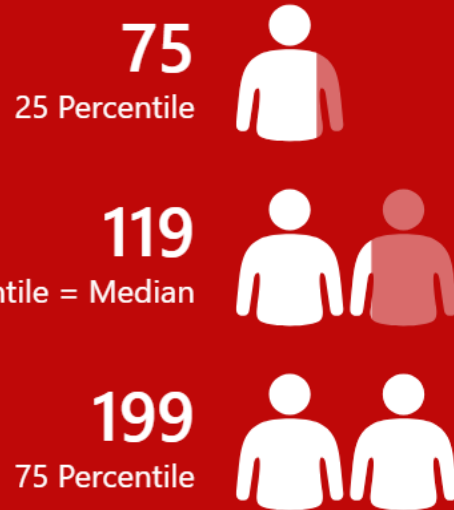
Source : STKI Research



Windows team includes Windows servers, AD, exchange/365, VMWARE ESX VDI-TS

of **Windows servers** (production) per Windows system staff member

Source : STKI Research



Windows team includes Windows servers, AD, exchange/365, VMWARE ESX VDI-TS

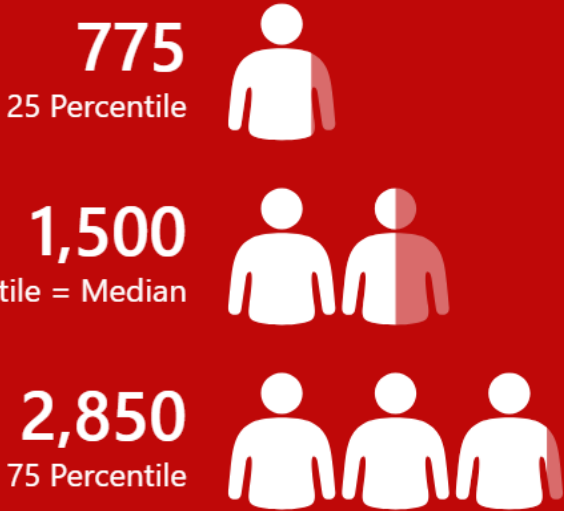
Percent of **Windows production** servers from **all** (prod+dev+test) Windows servers

Source : STKI Research



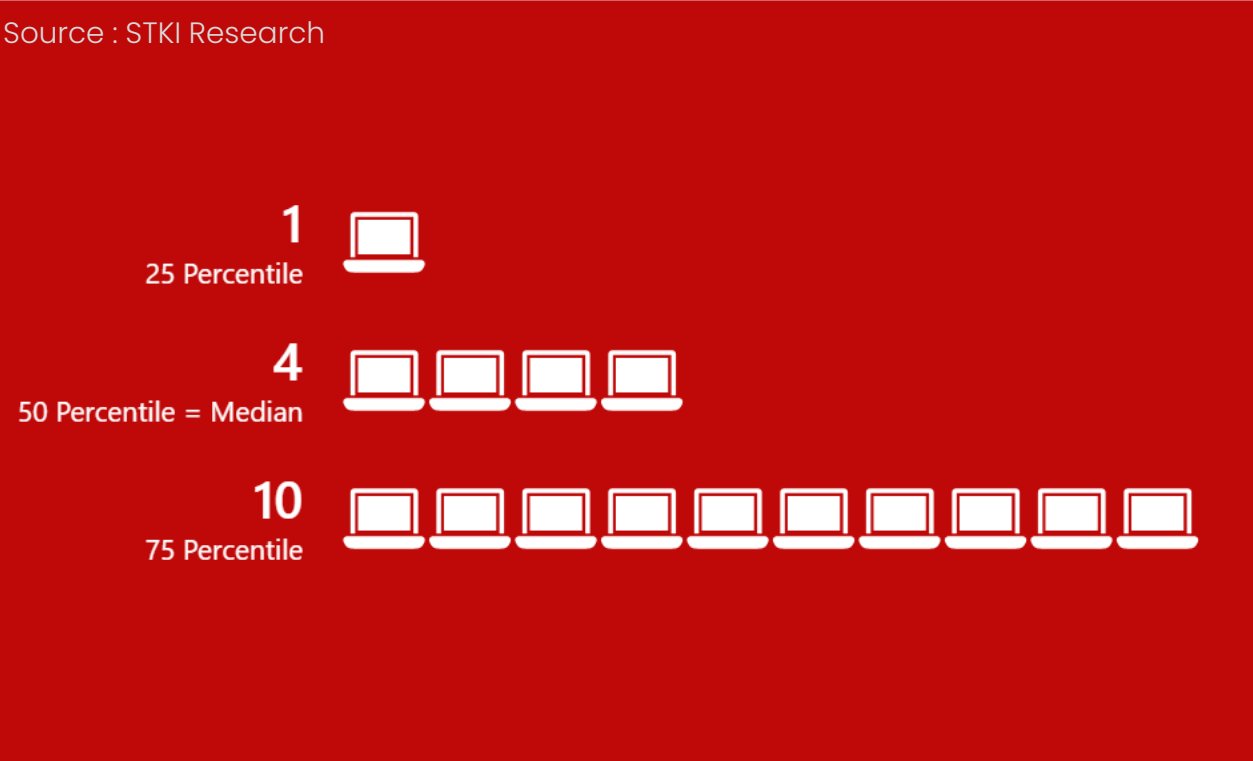
#of **SBC users** (terminal server, Citrix, VDI) per **SBC staff** member

Source : STKI Research



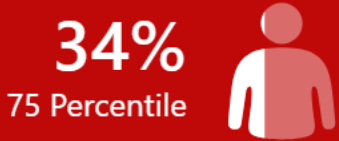
SBC (Server Based Computing) staff is part of Windows team in most cases

How many **Windows** VM are created/modified per week?



What percent from **Windows** team effort is dedicated to **cyber**?

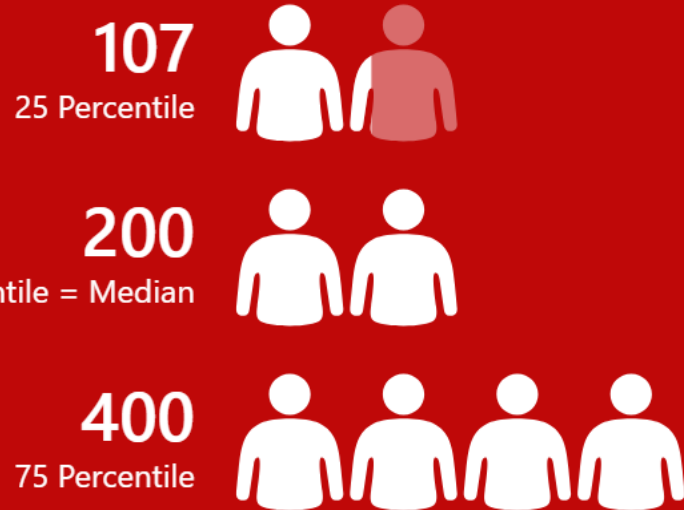
Source : STKI Research



“Cyber” is defined differently - example - some CIOs consider patches to be part of cyber security, while others may not consider it to be part of cyber security

of **Linux** servers (all:prod+dev+test) per Linux system staff member

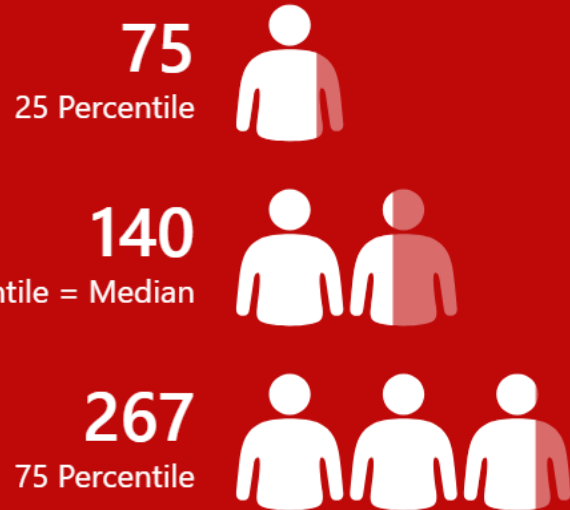
Source : STKI Research



Linux server team is mainly only responsible for Linux servers

of production **Linux** servers per Linux system staff member

Source : STKI Research



Linux server team is mainly only responsible for Linux servers

Percent of Linux **production** servers from **all** (prod+dev+test) Linux servers

Source : STKI Research



How many **Linux** VMs are created/modified per week?

Source : STKI Research




Linux enviroment is more stable than Windows

Percent of effort from **Linux** team dedicated to **cyber**

Source : STKI Research


5%
25 Percentile



9%
50 Percentile = Median



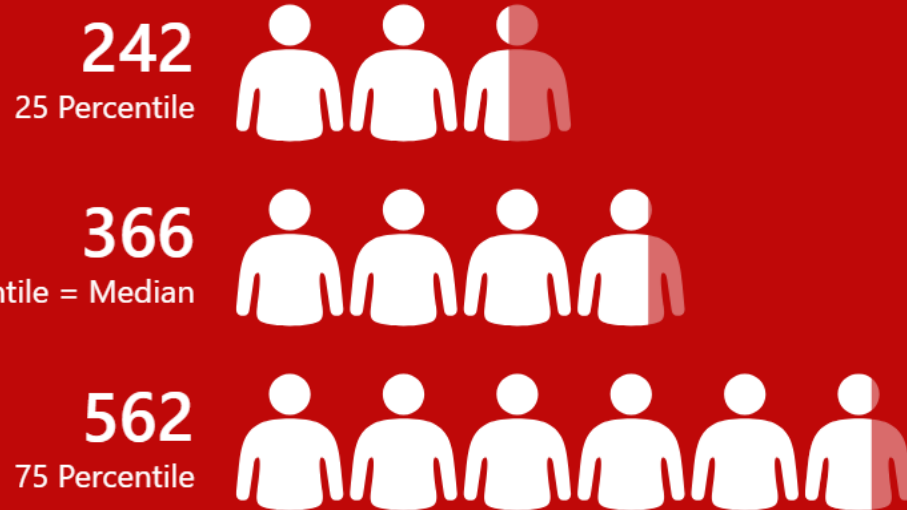
14%
75 Percentile



“Cyber” is defined differently – example – some CIOs consider patches to be part of cyber security, while others may not consider it to be part of cyber security

Number of **Employees** (using PC) per **System+Storage staff member**

Source : STKI Research



Windows + Linux + Storage (with DR, Backup) staff members

IT Operation center (**NOC**, ITOC) size

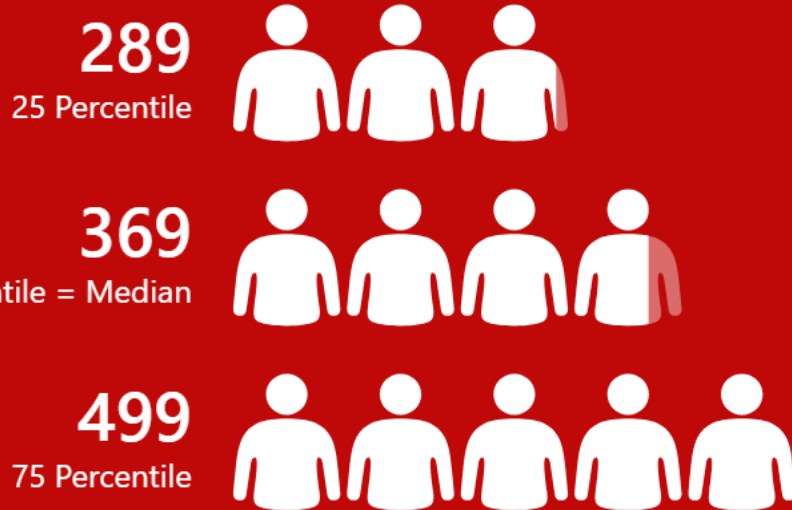
Source : STKI Research



Sometimes the NOC-ITOC is acting as Help Desk during off hours

Devices (desktop, laptop, handhelds) per **first level support member**

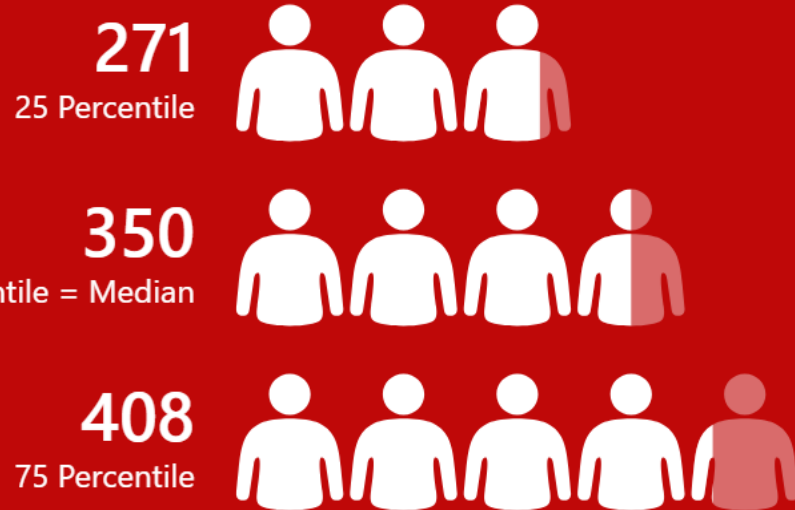
Source : STKI Research



- Common metric – tickets per users is 1.2 per month (100 users will have 120 tickets per month)
- SOME times there are more employees than devices (working in shifts) and sometimes more devices than employees (several devices per employee up to 3 devices per employee)

Employees (that use PC-devices) per first level support staff member

Source : STKI Research



Devices per second level support (**PC technicians**) staff member

Source : STKI Research



Employees per second level support (**PC technicians**) staff member

Source : STKI Research

219
25 Percentile



354
50 Percentile = Median

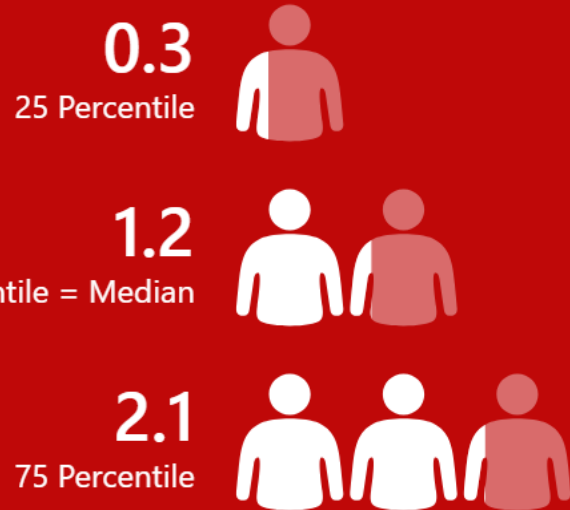


635
75 Percentile



Second level support (**PC technicians**) per **site** (location)

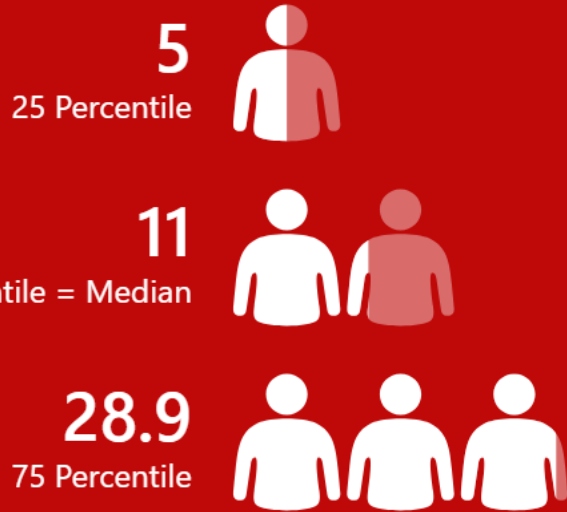
Source : STKI Research



Isolated network are not counted as locations

Employees per site (location) per second level support (PC technicians) staff member

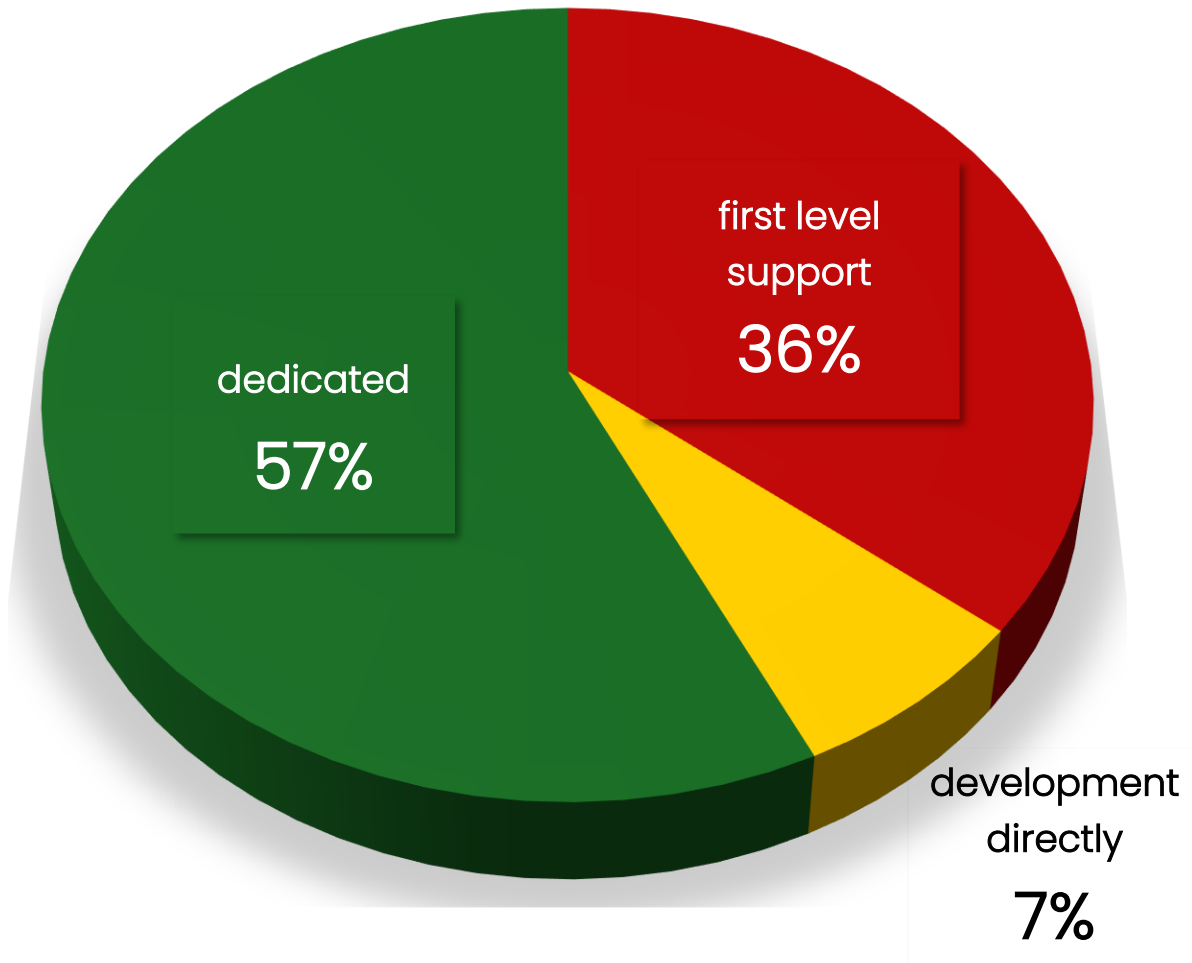
Source : STKI Research



75 Percentile more likely to have thin clients

Isolated network are not counted as locations

Who gets the application related tickets?



In most cases the first level support will answer all calls

In case the ticket is not solved by the first level support or dedicated team (if exists) it will always go to the development

Sometimes the “dedicated application support team” is part of “applications” and of even the business unit and not part of infra-ops

Number of **devices** per 3rd level support staff member (**creating the PC image**)

Source : STKI Research

2300
25 Percentile



3400
50 Percentile = Median



5700
75 Percentile



Number of **employees** per 3rd level support staff member (**creating the PC images**)

Source : STKI Research

1583
25 Percentile



2958
50 Percentile = Median

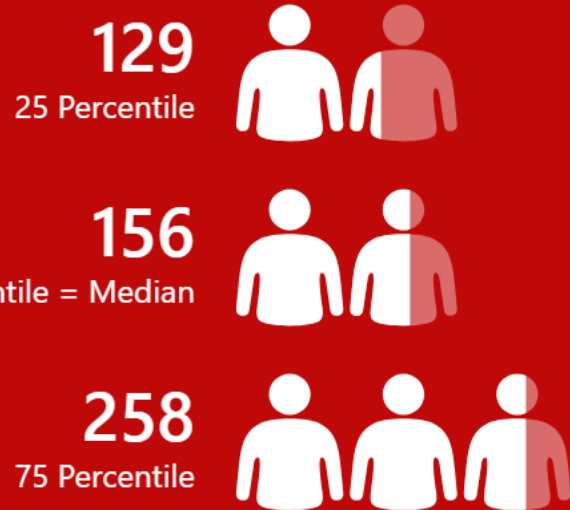


5375
75 Percentile



of **devices** (PC laptops handhelds) per **total support staff** member (1st +2nd +3rd) not including application support

Source : STKI Research



of **employees** (that use PC) per **total support staff** member (1st + 2nd + 3rd) not including application support if exist


Source : STKI Research



What is the level of effort related to “**cyber**” by the **support team**?

Source : STKI Research


14%
25 Percentile



21%
50 Percentile = Median



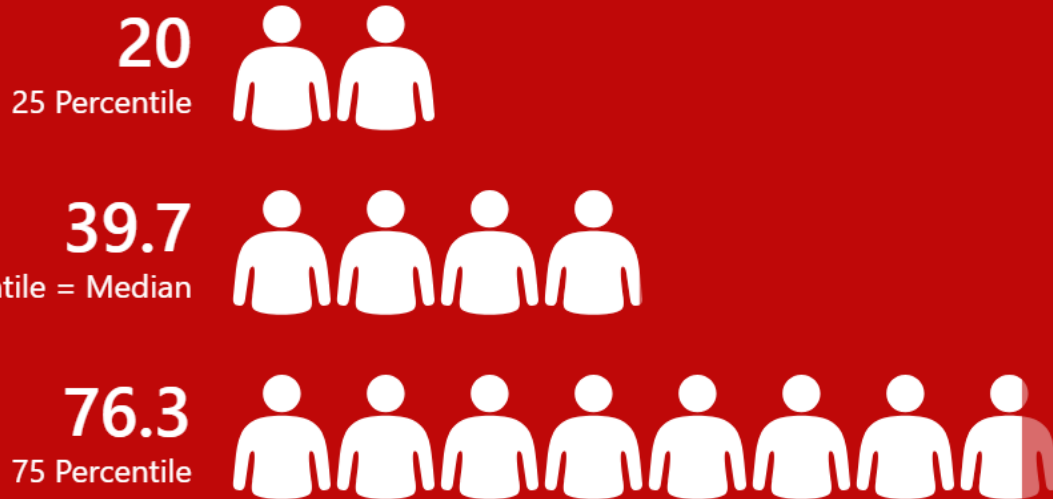
35%
75 Percentile



“Cyber” is defined differently – example – some CIOs consider patches to be part of cyber security, while others may not consider it to be part of cyber security

of **applications** per **DBA** staff member

Source : STKI Research



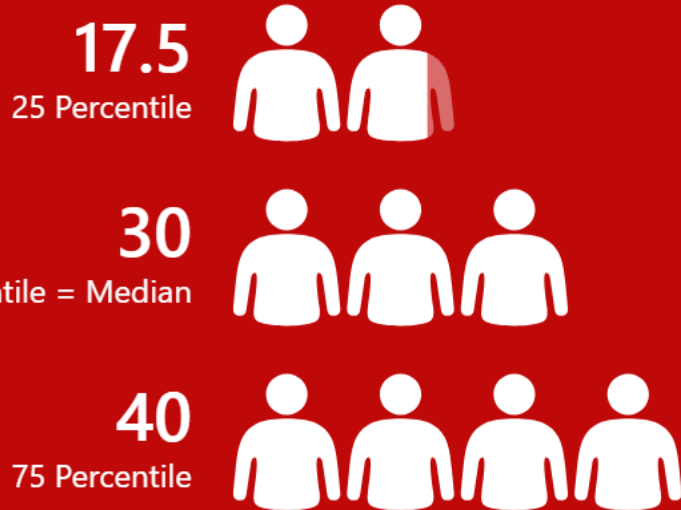
All application are counted “big” and “small”

Sometimes DBA are responsible for general data infrastructure (“Splunk”, “Elastic”) this lowers the ratio

ADBS + Infra DBA

of **developers** per **DBA** staff member

Source : STKI Research



DBA give support for “packages” or “application that are developed by outside contractors” hence the developers are not counted

Sometimes DBA are responsible for general data infrastructure (“Splunk”, “Elastic”) this lowers the ratio

ADBS + Infra DBA

Level of effort related to **cyber** from **DBA** work

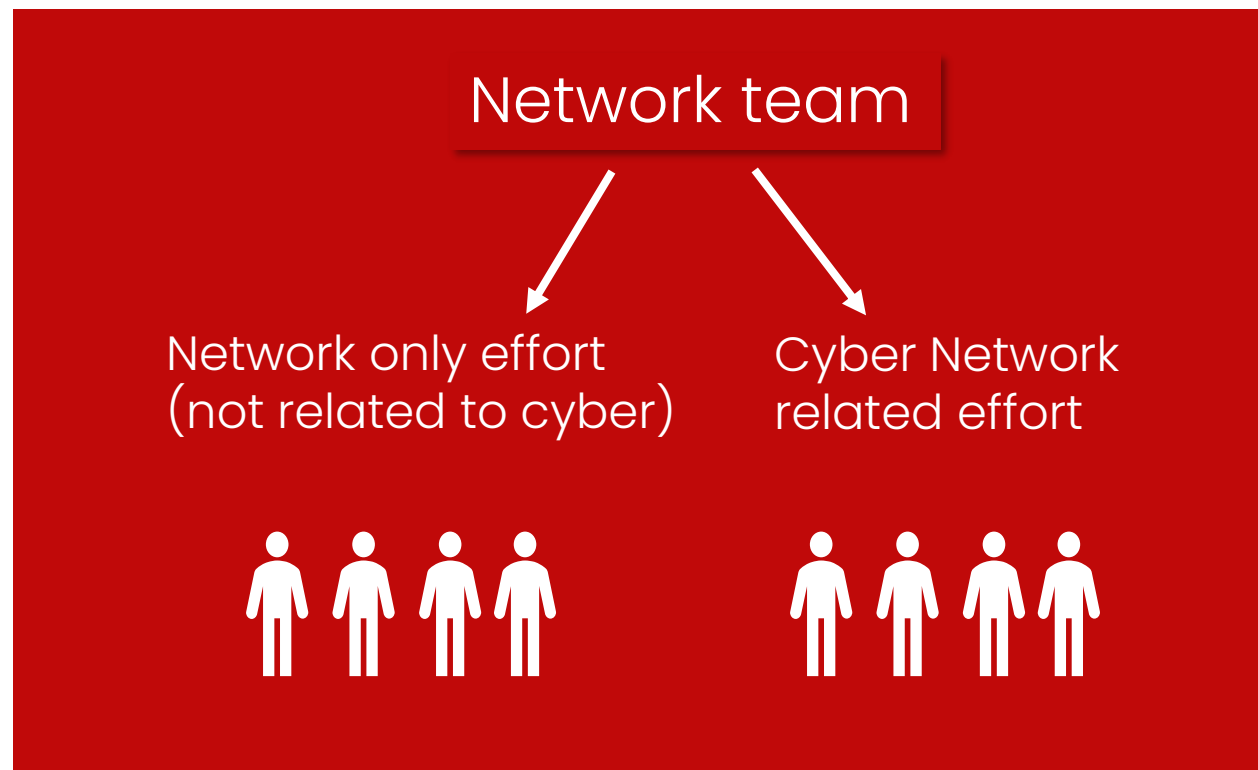
Source : STKI Research



“Cyber” is defined differently - example - some CIOs consider patches to be part of cyber security, while others may not consider it to be part of cyber security

Cyber effort related to network (Net-Sec) is done by the

- General network team
- Dedicated "Net-Sec" team
- Part of the general "Cyber implementation" team
- When there is "net sec" team it will be the only "cyber implementation team". There are exceptions... ("dedicated system-cyber team")



Hot ports (connected) per network staff member (cyber effort not included)

Source : STKI Research

3,778

25 Percentile



5,000

50 Percentile = Median



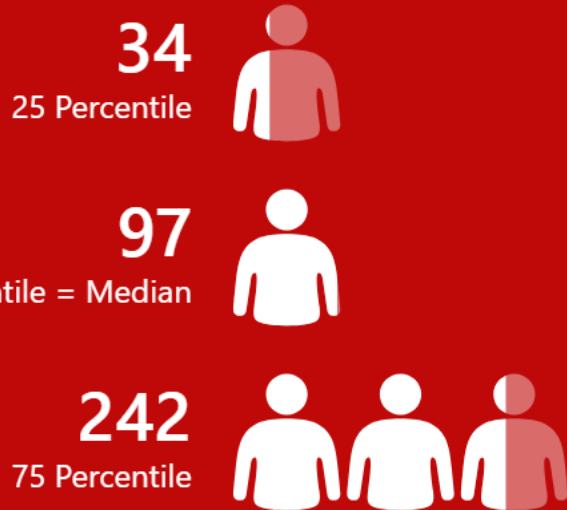
9,125

75 Percentile



Hot ports (connected) per network staff member (cyber effort not included) per location (site)

Source : STKI Research



Seperat networks are not counted as "locations"

Hot ports (connected) per network staff member cyber effort (either net-sec, network or cyber implementation team members)

Source : STKI Research

1,429
25 Percentile



4,000
50 Percentile = Median



5,455
75 Percentile



Hot ports (connected) per network staff member cyber effort per location (either net-sec, network or cyber implementation team members)

Source : STKI Research

29
25 Percentile



57
50 Percentile = Median

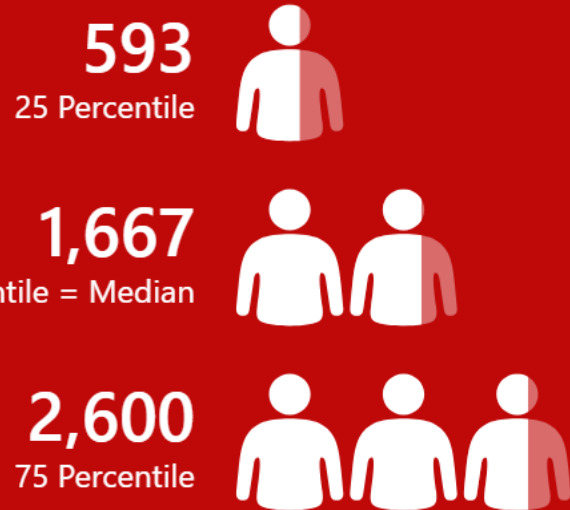


100
75 Percentile

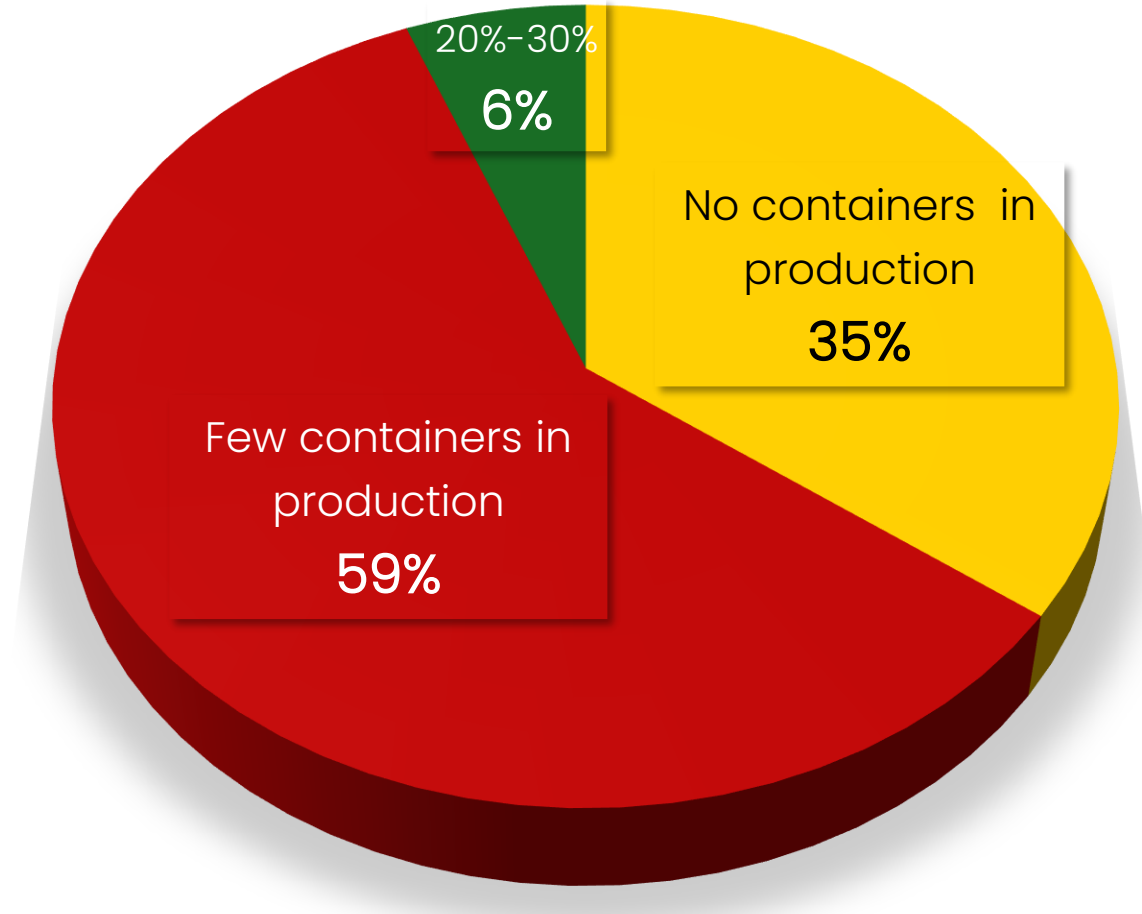


Employees per Cyber network related staff members (either net-sec, network or cyber implementation team members)

Source : STKI Research

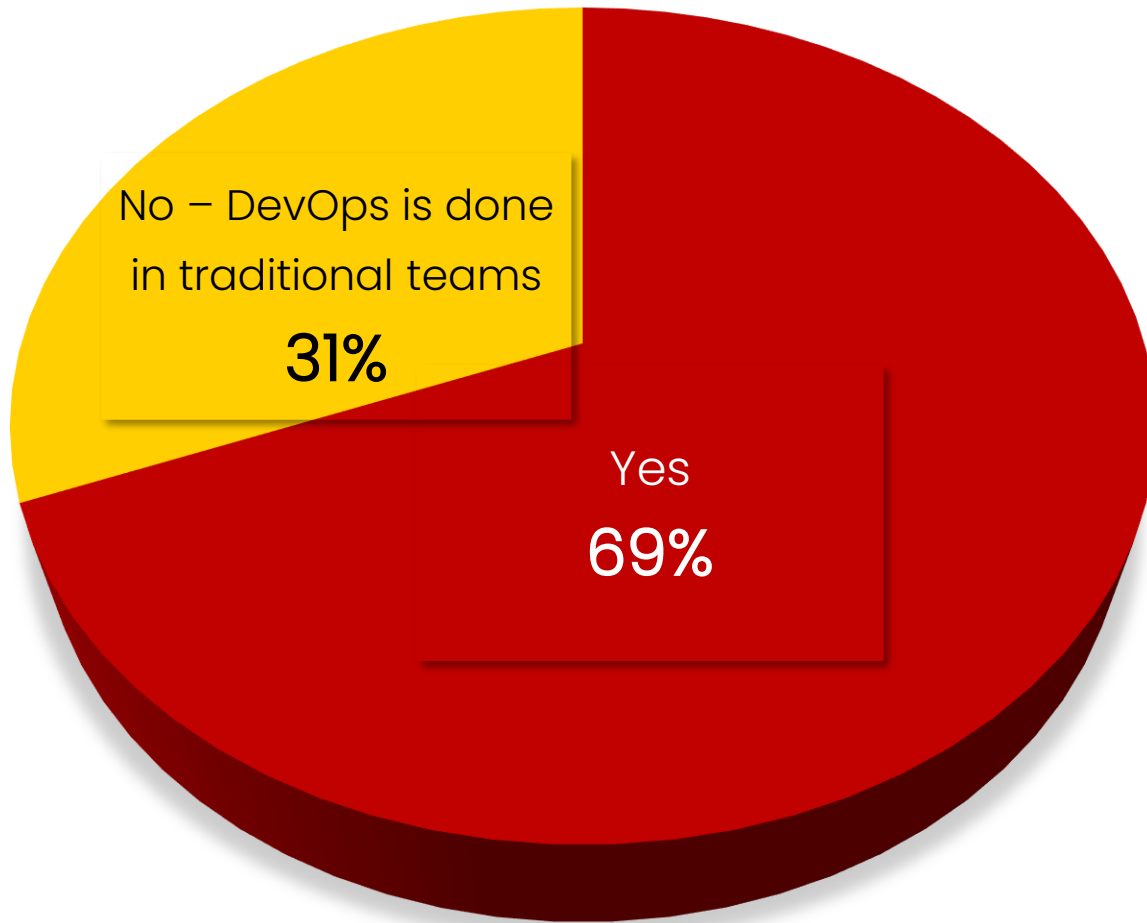


Percent of production system based on **containers**



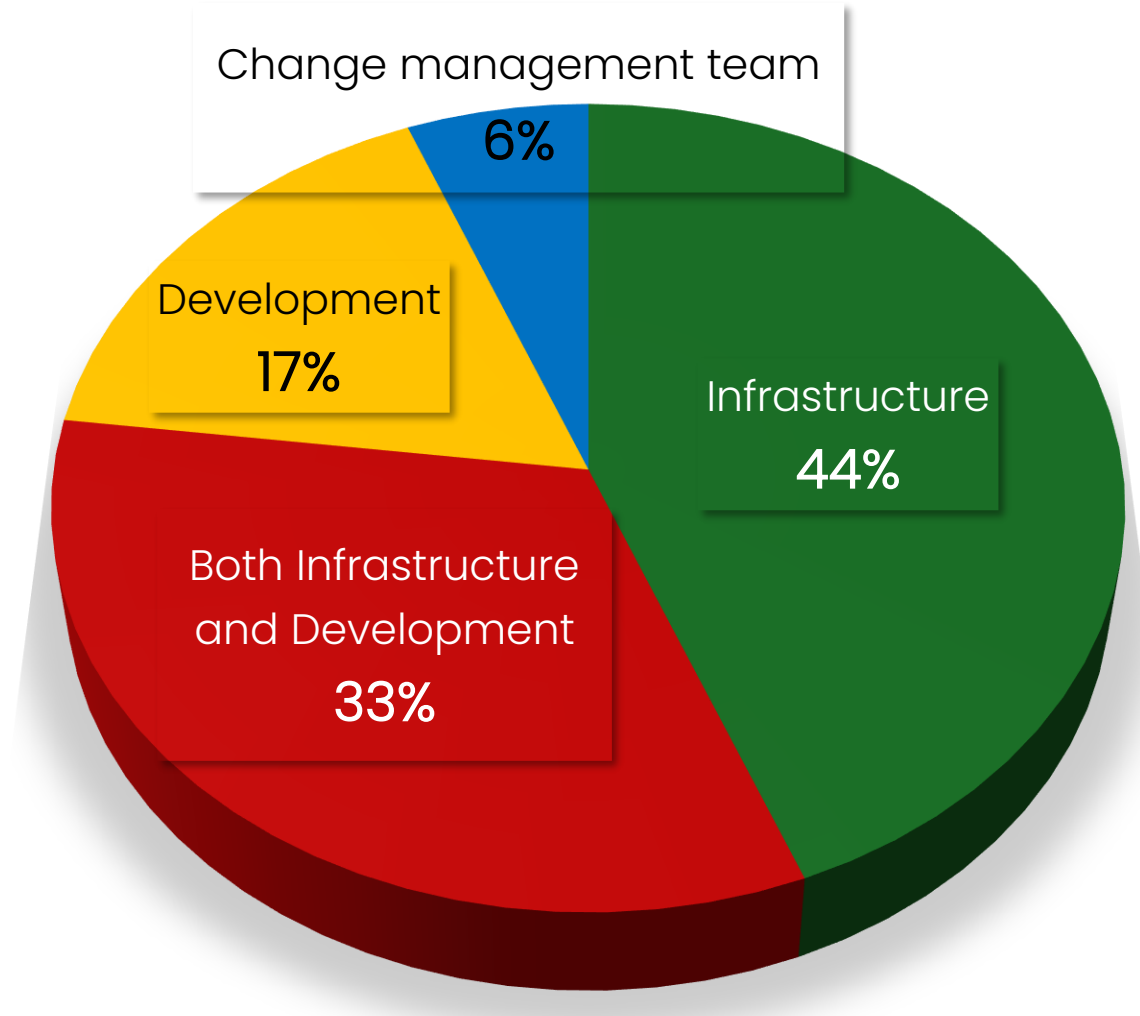
OEM (products) based on containers are not included

Is there dedicated **DevOps** team?



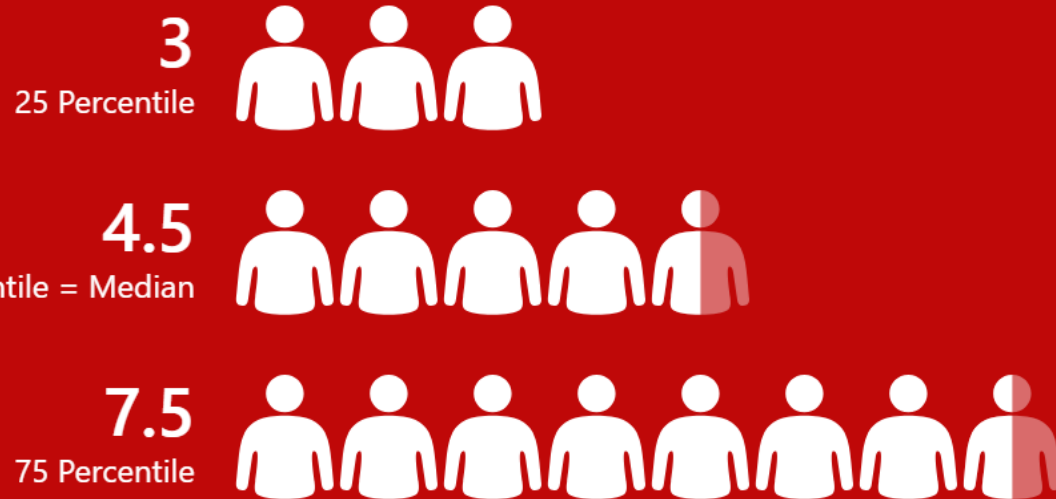
Even if DevOps team exist - not all DevOps related effort is done in this team

DevOps team reporting structure



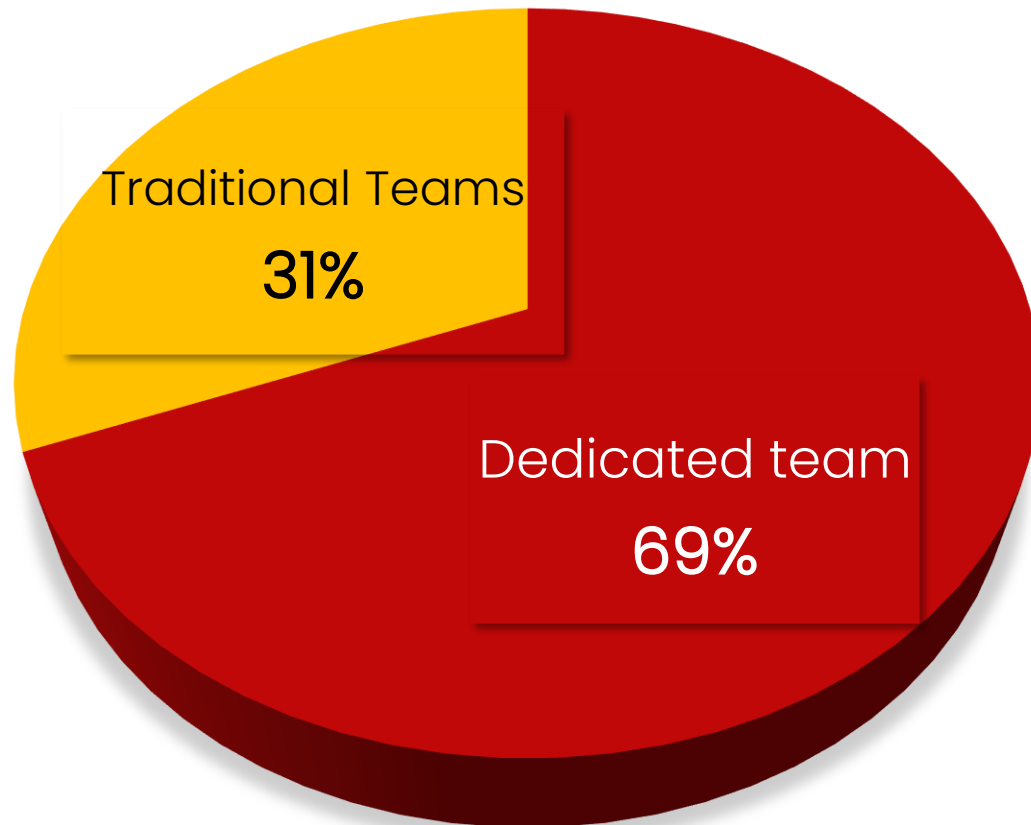
How big is the **DevOps** team

Source : STKI Research



Devops is "app DevOps" (pipelines),
infra DevOps (IaC) or both
sometimes DevOps is part of "Cloud"

Cloud effort is done in (percent)



Sometimes cloud is part of devops ,
Sometimes devops is part of cloud
Sometimes devops=cloud

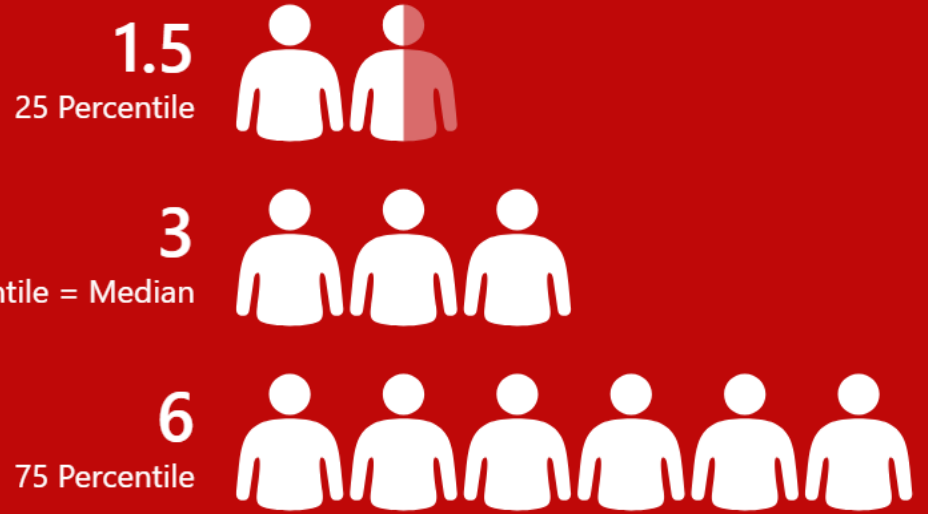
Size of public **cloud** team

Source : STKI Research



SAP **basis** personal

Source : STKI Research



SAP **basis** personal per SAP **module**

Source : STKI Research



Demographics: Number of employees

Source : STKI Research

2250
25 Percentile



5000
50 Percentile = Median



7950
75 Percentile



This does not include “partners” like external doctors in Health, insurance agents in Insurance, etc.

Demographics: **Number of employees** that use computers, handhelds, etc.

Source : STKI Research

2100
25 Percentile



4575
50 Percentile = Median



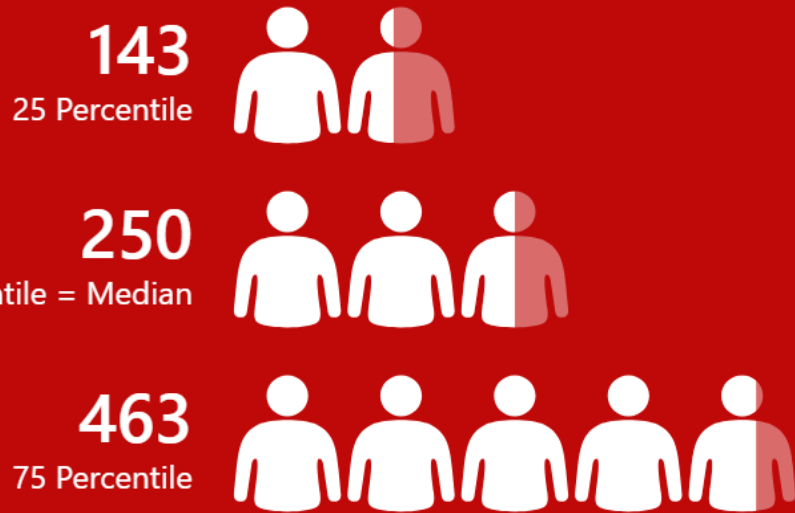
6875
75 Percentile



This does not include “partners” like external doctors in Health, insurance agents in Insurance, etc.

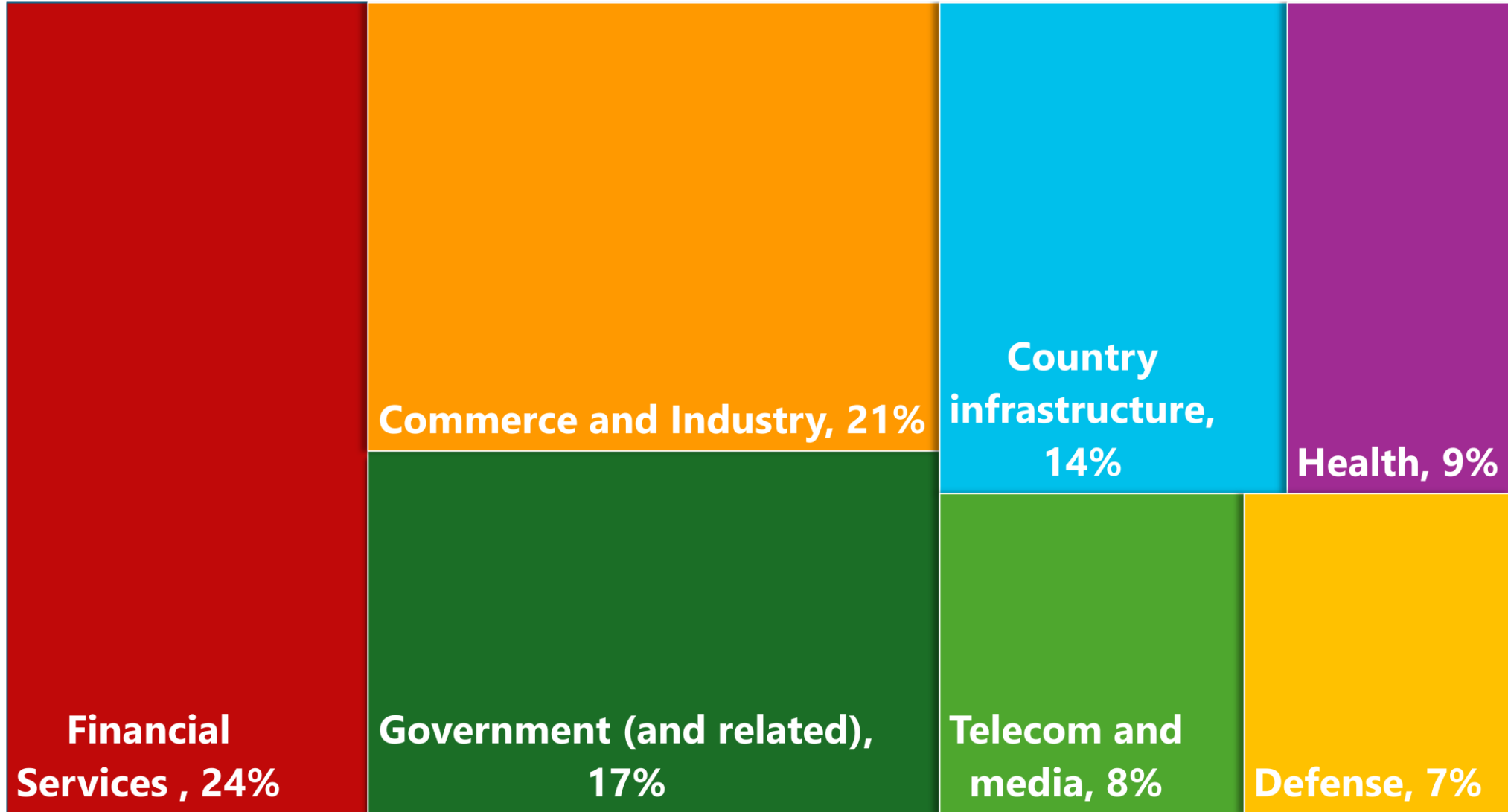
Demographics: Number of **IT employees**

Source : STKI Research



Including full time contractors

SURVEY DEMOGRAPHICS



Survey methodology

- 👤 Question to Org A – “how many Windows OS do you support?”, “How big is your Windows team?”
- 👤 Answer: “3500 Windows OS’s” , “ 10 FTE (Full Time Employee) in the team”
- 👤 The Ratio is 350 Windows OS per FTE team in Windows team

Survey methodology

🧑 Org A : The ratio is 350 Windows OS per FTE team in Windows team

🧑 Org B: The ratio is 190

🧑 Org C: The ratio is 131

🧑 Org D: The ratio is 167

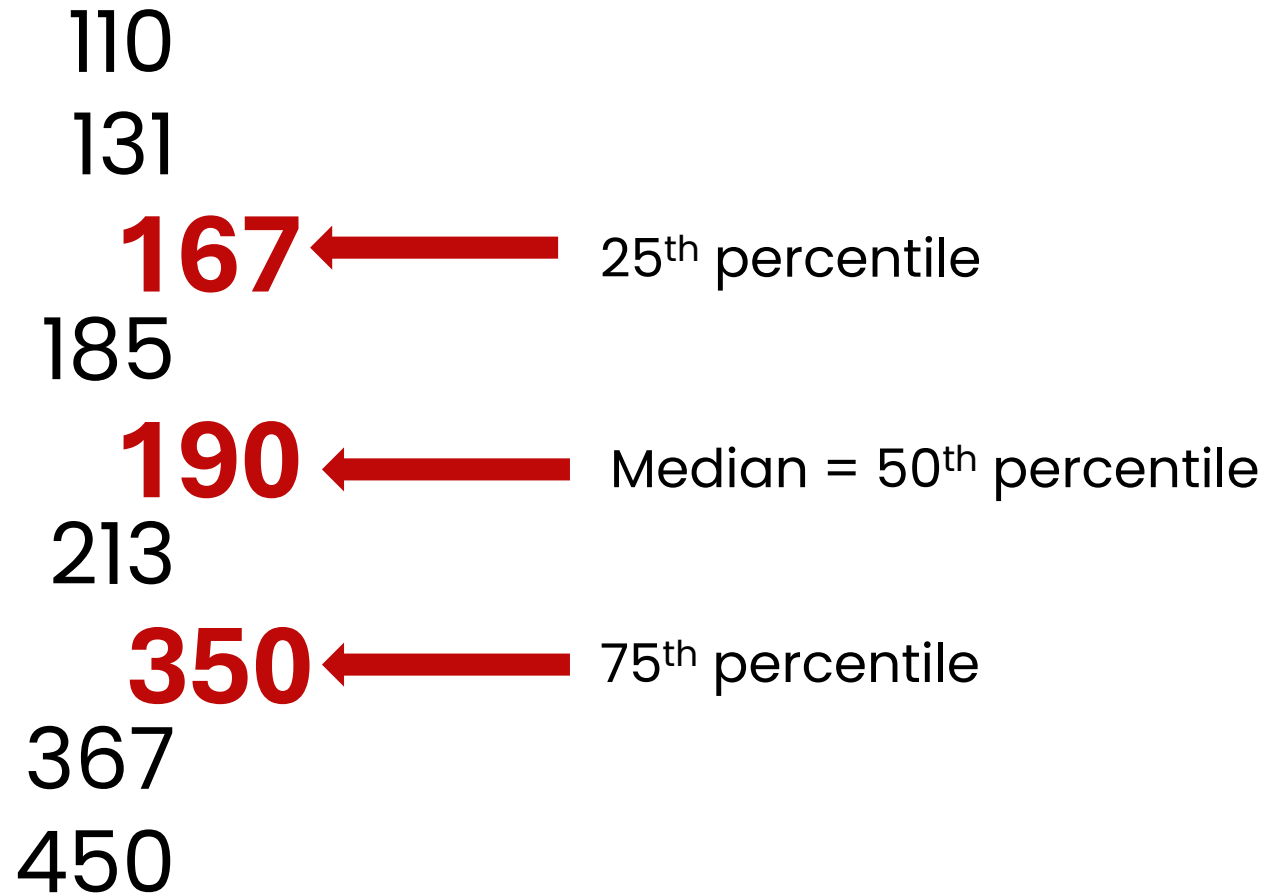
🧑 Org E: The ratio is 450

🧑 185, 213, 110, 367, etc...

350
190
131
167
450
185
213
110
367

Survey methodology

110
131
167
185
190
213
350
367
450





Thank you

