



GLOBAL AND DISTRIBUTED SOFTWARE DEVELOPMENT

October 24th, 2024

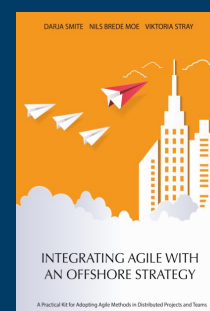
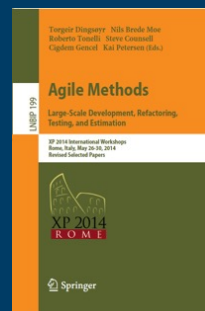
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Nils Brede Moe



- Chief Scientist SINTEF Digital and BTH
- Columnist E24.no
- Sourcing, innovation, agile practices, Virtual teams for 15 years
- Studies in Nordic countries, USA, China and Australia





Part two

- Motivation for Global Software Development
- Intellectual capital
- Networks
- Outsourcing and cost
- Work from anywhere



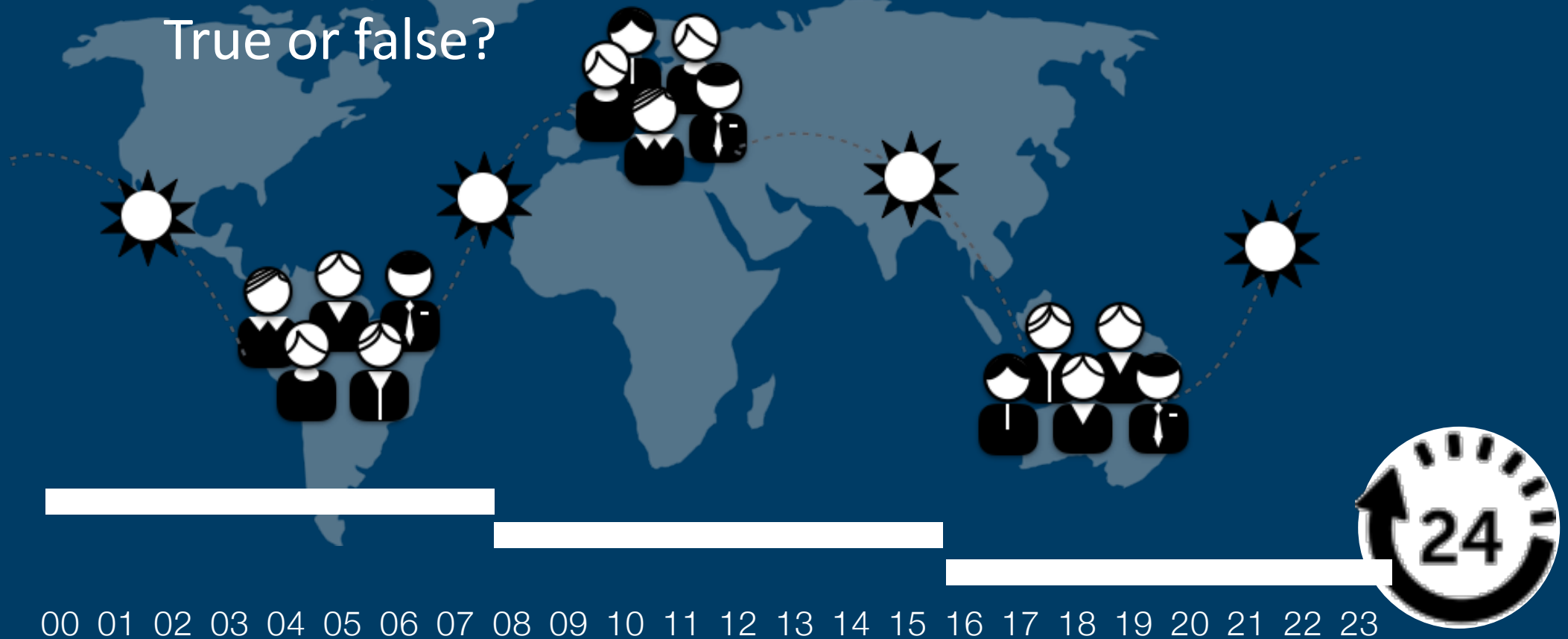


MOTIVATION FOR GLOBAL SOFTWARE DEVELOPMENT?



Follow the sun - Development 24/7 ☺

True or false?



Work From Anywhere

Introducing Working From Anywhere

 Anna Lundström and Alexander Westerdahl



*Work isn't something you come to the office for,
it's something you **do***

My Work Mode –full time from home, from the office, or a combination of the two.

Location choices – flexibility when it comes to what country and city each employee works from



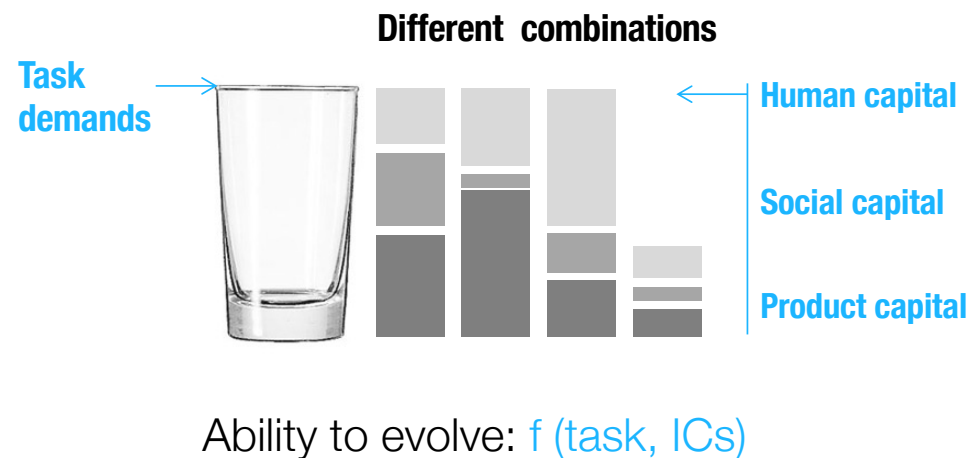
A well-working agile team in distributed teams

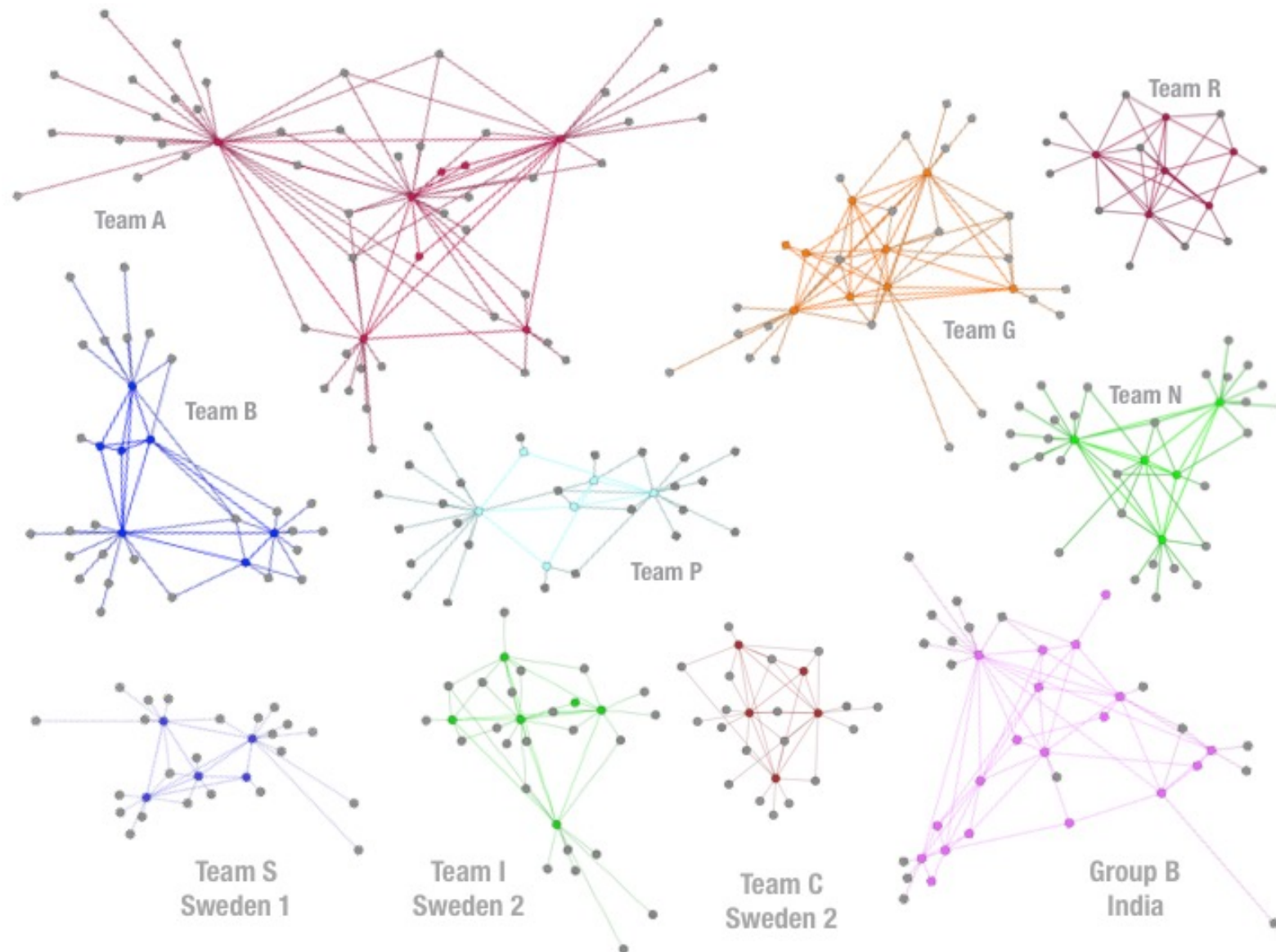
- Intellectual capital
- Turnover

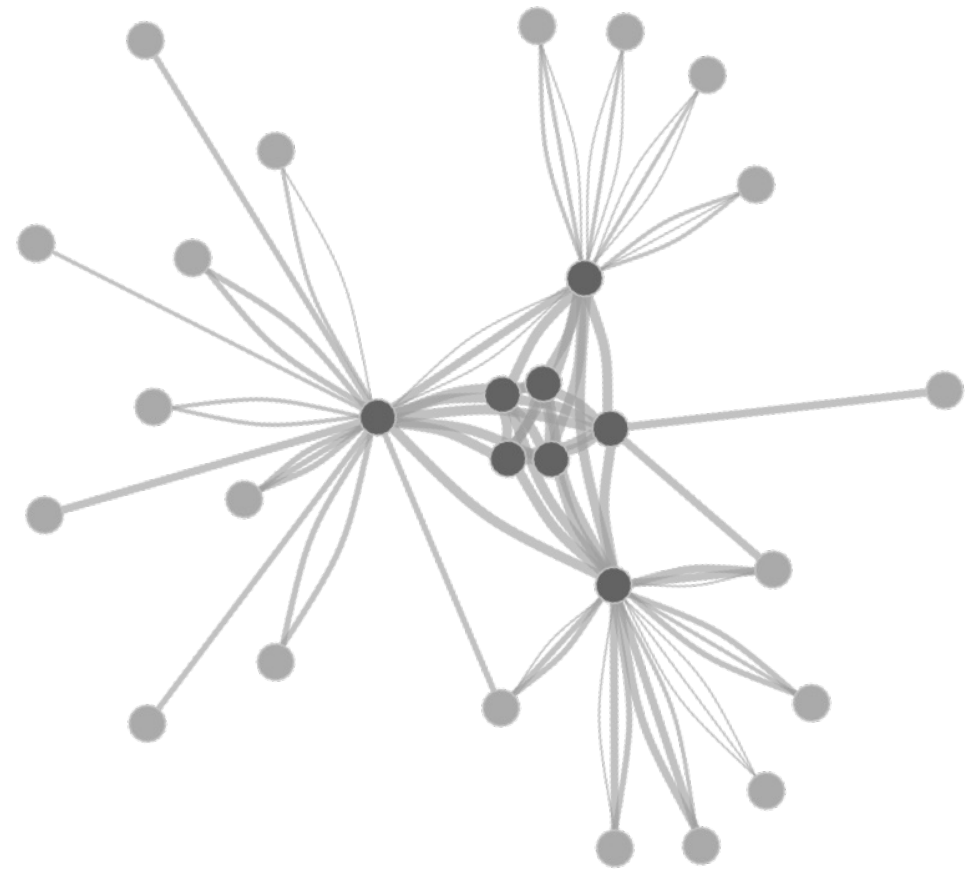
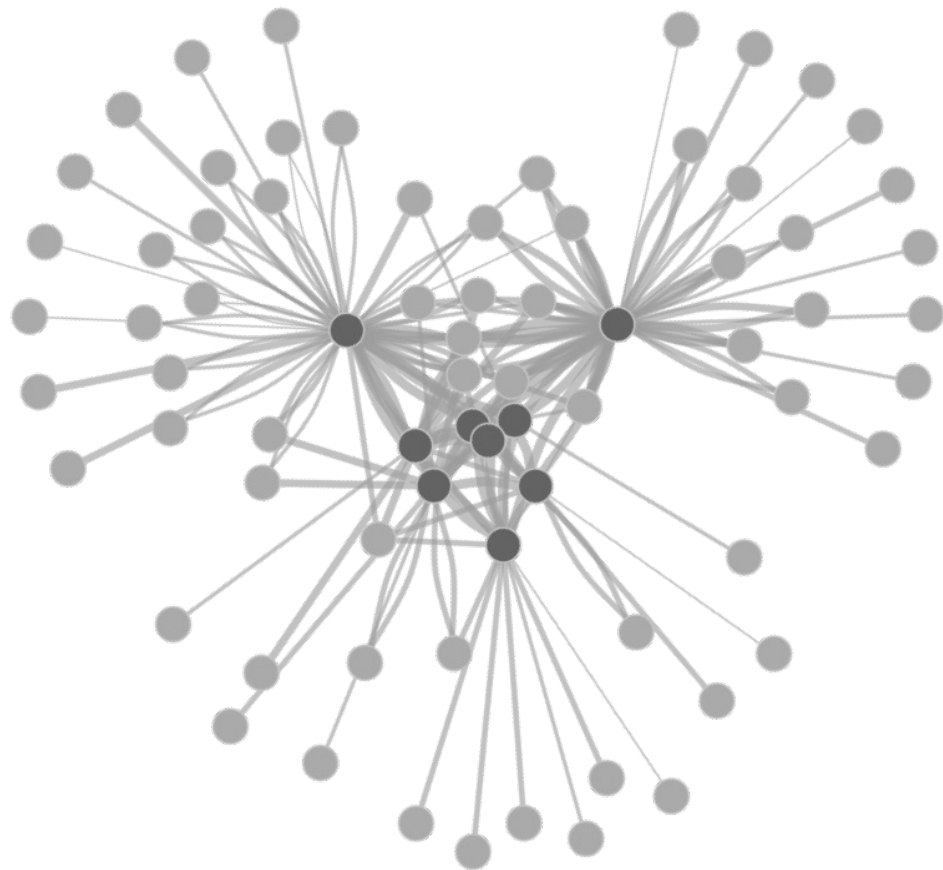
Intellectual capital

1. Good tool support and the necessary documentation (**organizational capital**),
2. Sufficient experience and expertise (**human capital**),
3. Useful connections (**social capital**).

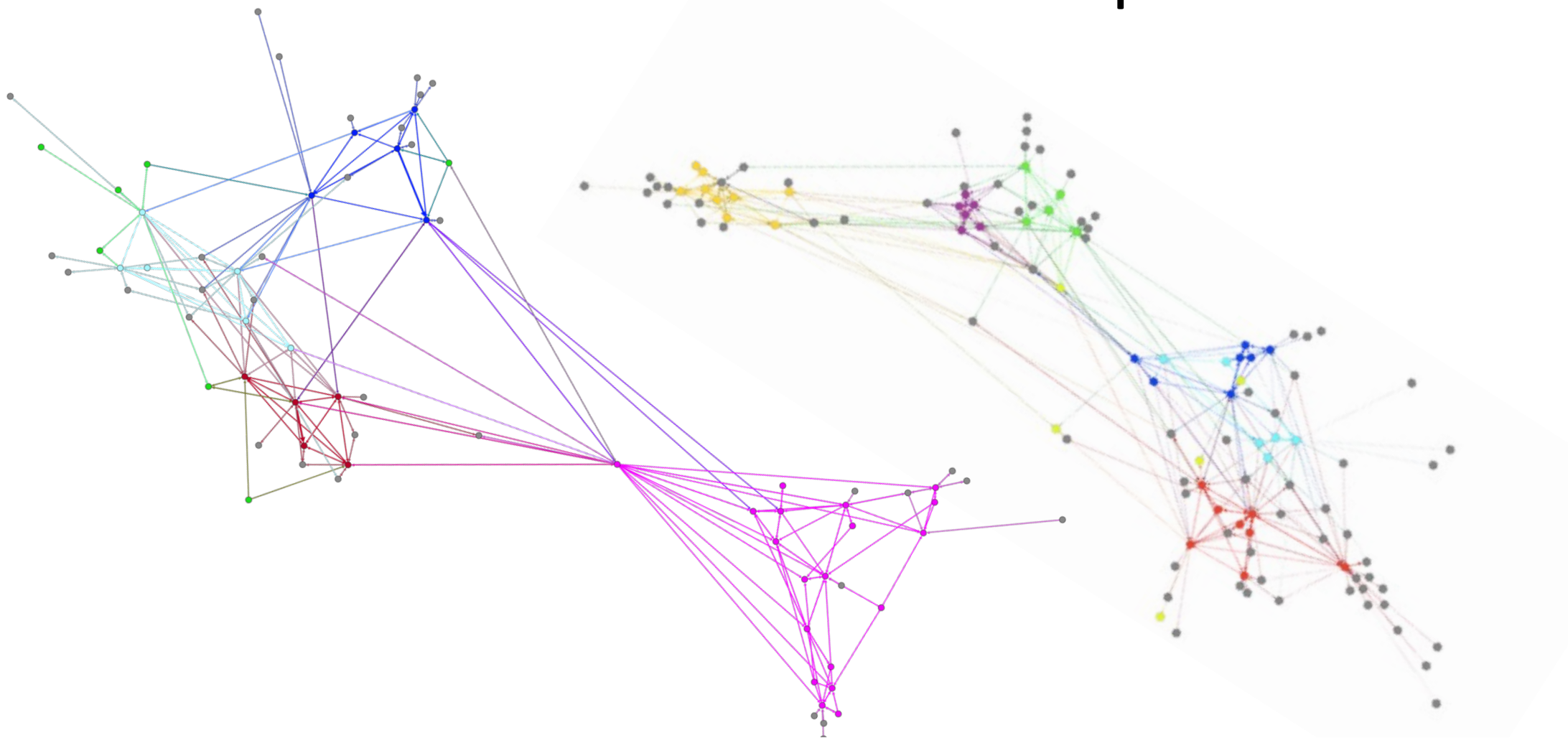
- › Intellectual capital – human capital, social capital and product/organizational capital
- › Human capital
 - › Technical skills
 - › Domain knowledge
 - › Product knowledge
 - › Creativity
- › Social capital
 - › Teamwork
 - › Networking
- › Product/Organizational capital
 - › Source code
 - › Architecture
 - › Product documentaiton
 - › Process documentation
 - › Organizational culture





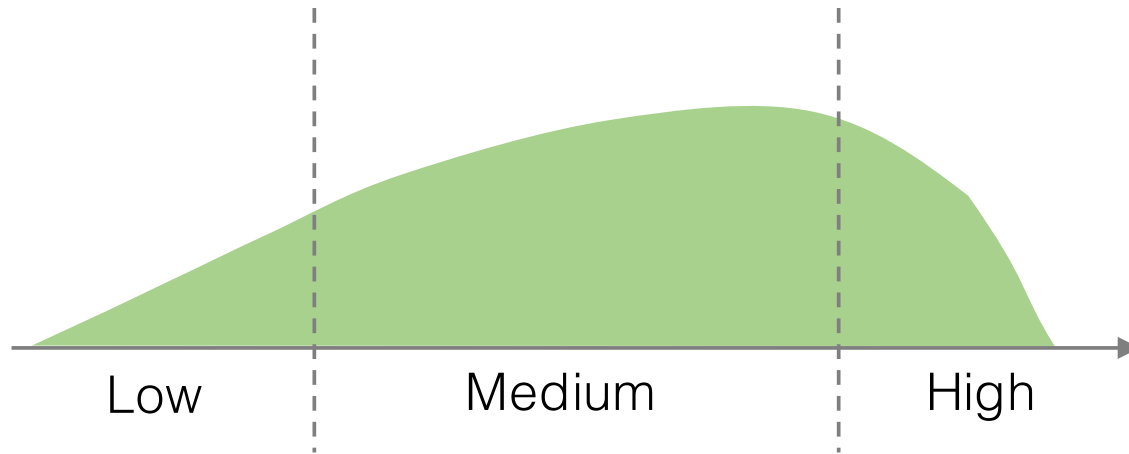


Different network patterns



HOW TO LOOSE MONEY EVEN IF THE HOURLY RATE IS ONLY 30%

Desired staffing



Description of measures:

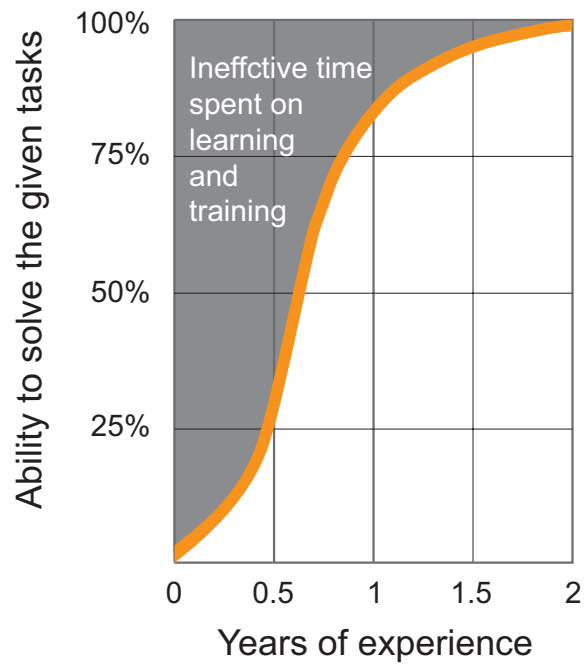
Low	1-2 years of experience
Medium	2-5 years of experience
High	over 5 years of experience

Healthy Staff Structure:

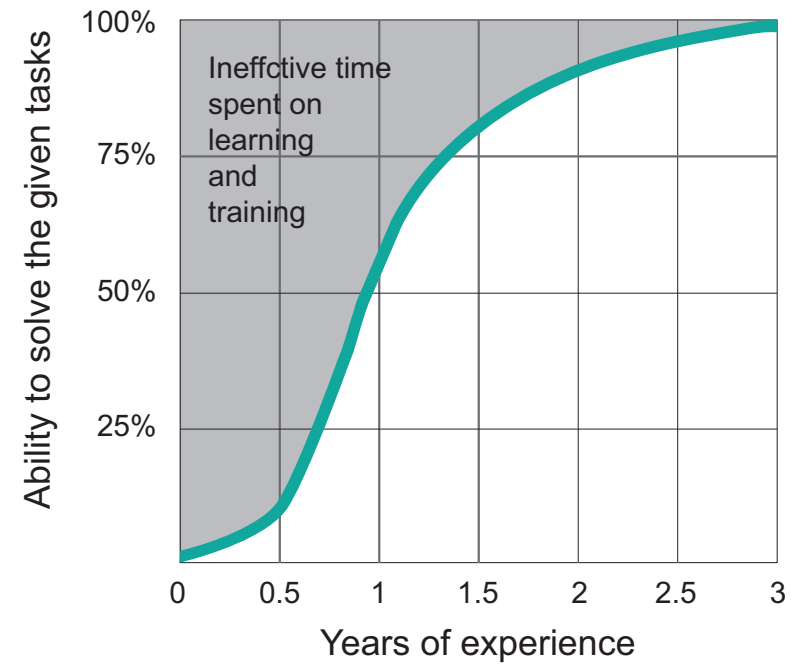
- High level of competence
- Controlled turnover
- Fresh blood / new hires

Learning curves

In-house team



Offshore team

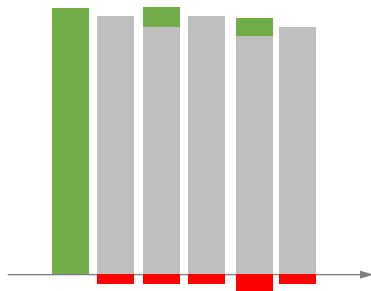


Attrition

Norbank

21% attrition in 1,5 year

Quarterly absolute data for the first 1,5 year



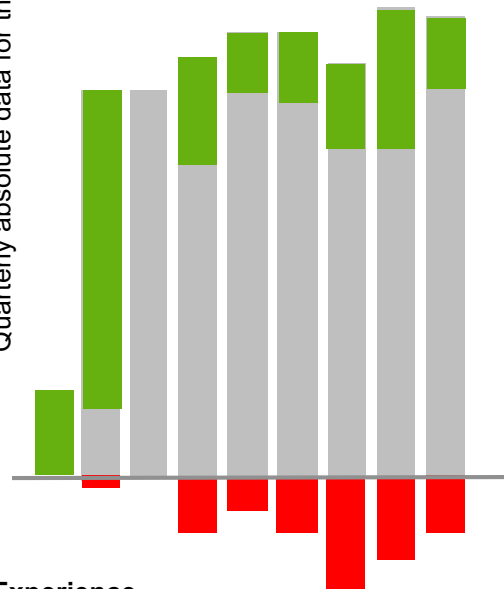
Experience

To employ 27 people at the end of 1,5 years, Storebrand has hired 33 people and lost 6 (21% turnover for the 1,5 year period)

SwedCo

34% attrition in 1,5 year
140% attrition in 3 years

Quarterly absolute data for the first 3 years



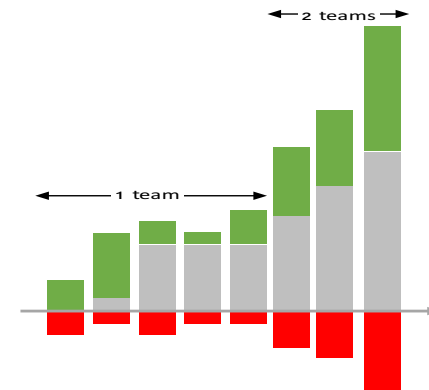
Experience

To employ 72 people at the end of year 3, SwedCo has hired 118 people and lost 58 (140% turnover for the 3 year period)

DutchCo

75% attrition in 1,5 year
54% attrition in 8 years

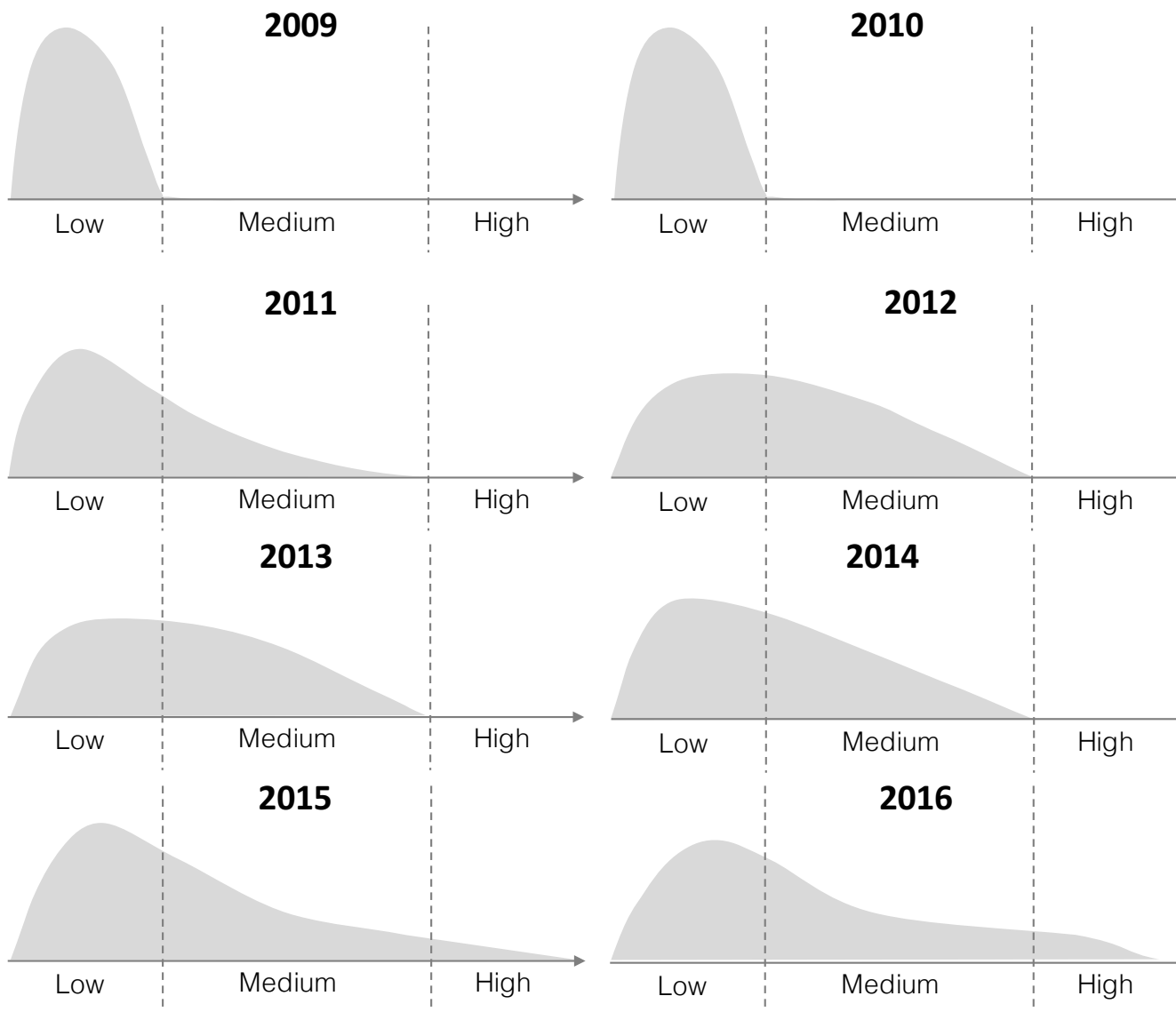
Yearly absolute data for the 8 year period



Experience

To employ 18 people at the end of year 8, DutchCo has hired 39 people and lost 21 (54% attrition for 8 year period)

■ New developers ■ Existing developers ■ Developers who left



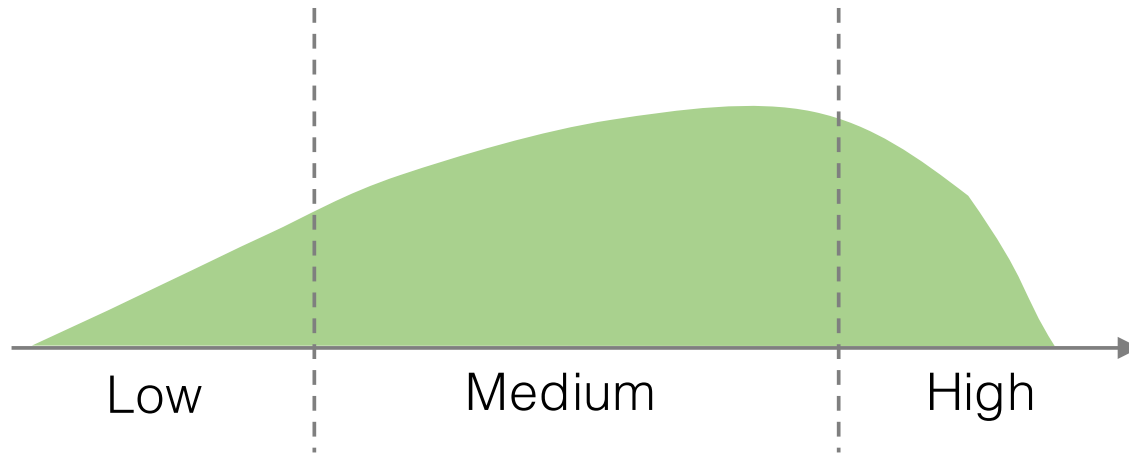
What to expect?

SwedCo

Staffing structure

Low <2 years; Medium 2-5 years; High 5+ years

Desired staffing

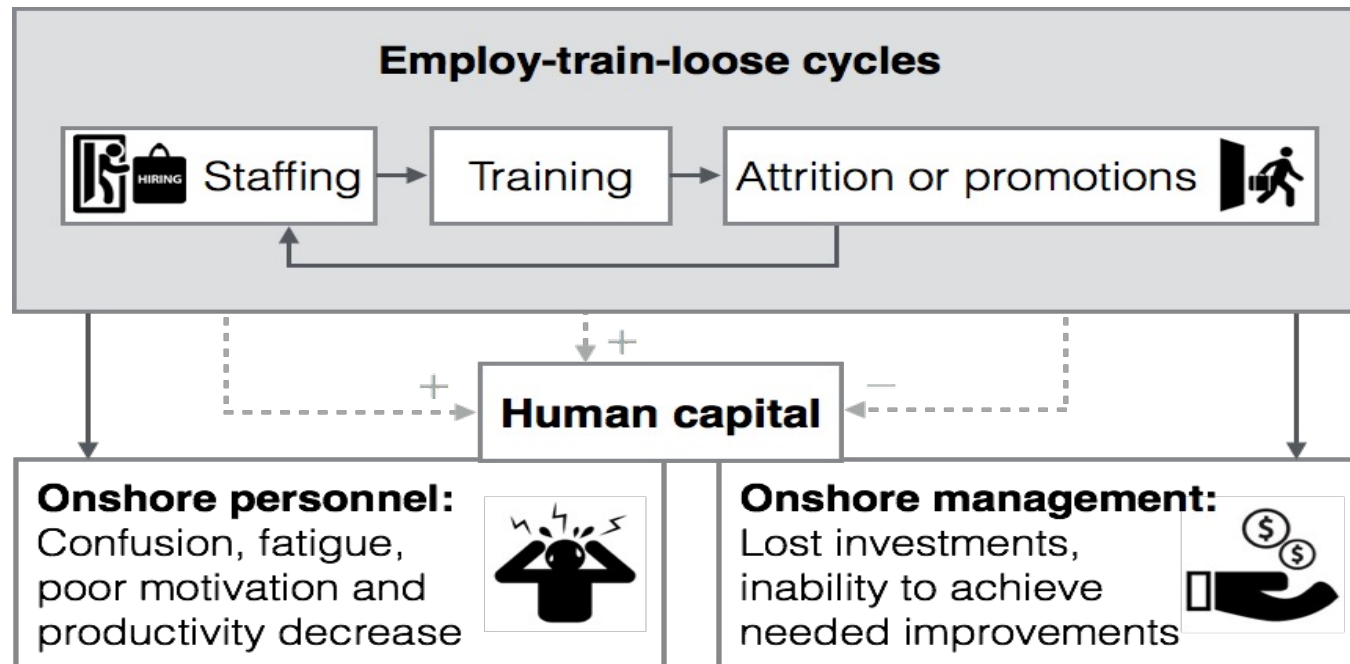


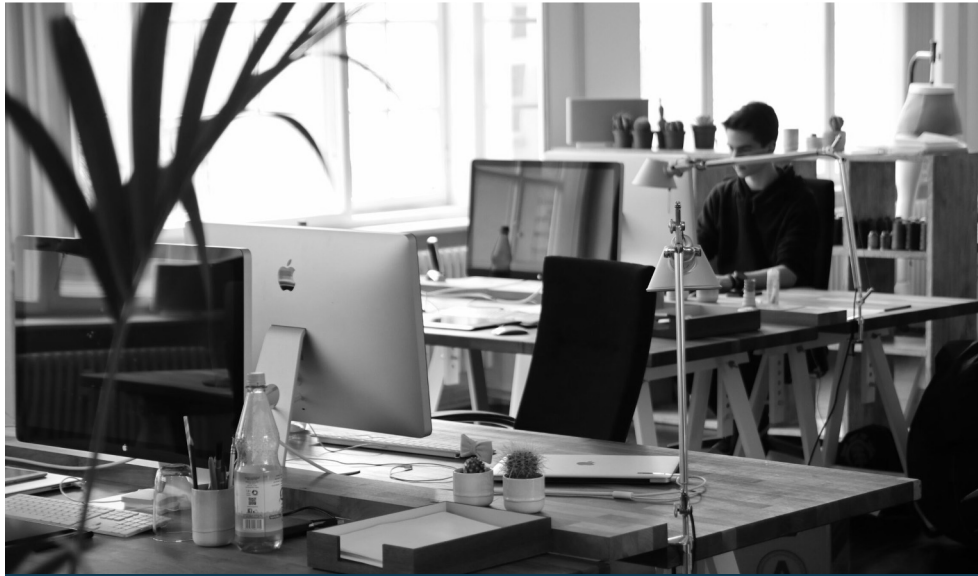
Description of measures:

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Healthy Staff Structure:

- High level of competence
- Controlled turnover
- Fresh blood / new hires





Work from anywhere



Office-based

Office-first

Hybrid

Remote-first

All-remote

Twitter

[2022] 40h/week in the office

Apple

[2021] From 1-2 days in February to mandatory office Mon, Tue, Thu
Made 67% of employees unhappy
56% were looking to leave the company

[2022] Mandatory office Tue, Thu + 1
+ up to 2 weeks of temporary remote work per year

Amazon

[2021] From full time office culture as the baseline to 3 mandatory office days with exception

Google

From 3 mandatory office days
→ 60% work onsite a few days/week + 4 weeks of temporary remote work per year + 20% working from home (with a pay adjustment)

“Bank24”

[2022] 3 mandatory office days
Wed + 2 days of choice

Meta

[2021] 50% of the time in the office is recommended + remote work options + 4 weeks of temporary relocation

Microsoft

[2021] Three categories:
– up to 50% WFH
– up to 100% WFH
– On-site only

Slack

Spotify

Has an option of fully remote work

Yelp

“Bank24”

[2021] 3 office days recommended

Twitter

Atlassian

Square

Pinterest

Shopify

Slack

Pinterest

Spotify

Plans to become a remote-first company in the future

Many startups

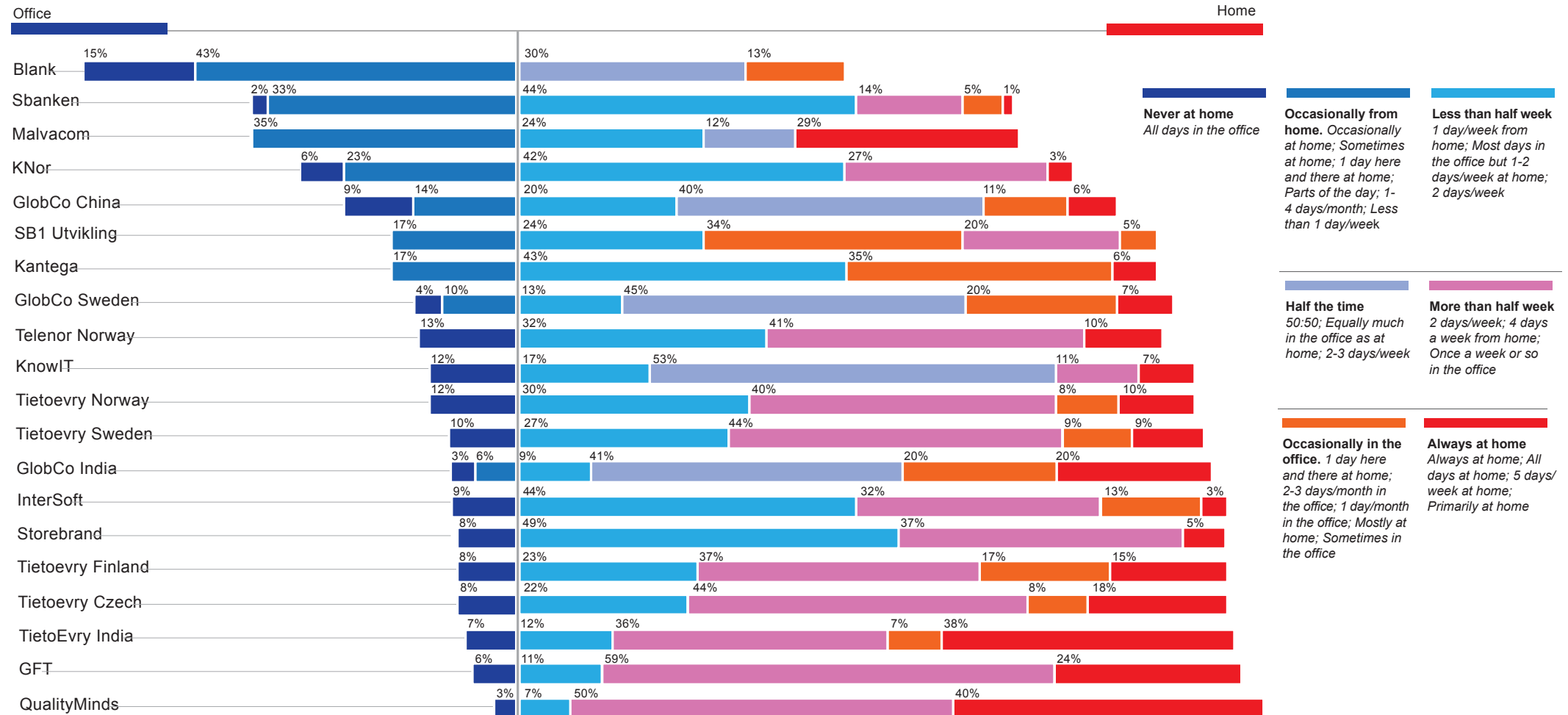
Matt Bradburn, the co-founder of People Collective: Eight startups in London (size: 50 to 100 people) have closed offices.

Yelp

4,400-person company stops the hybrid working (“worst of both worlds”) will only keep the headquarters office with a ‘hotelling’ model where desks can be rented for the day

Many prefer hybrid work in the future

Employee preferences: How often do employees want to work from home after the pandemic?



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Use of the office

Conclusion

By gender



By country



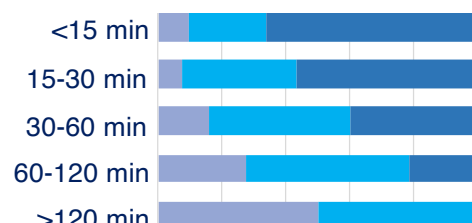
By role



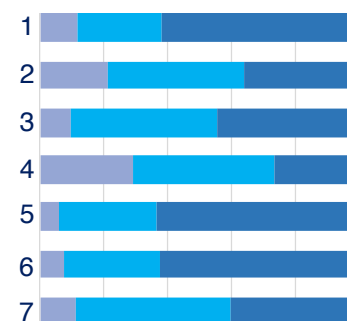
By age



By commute time



By department



Legend

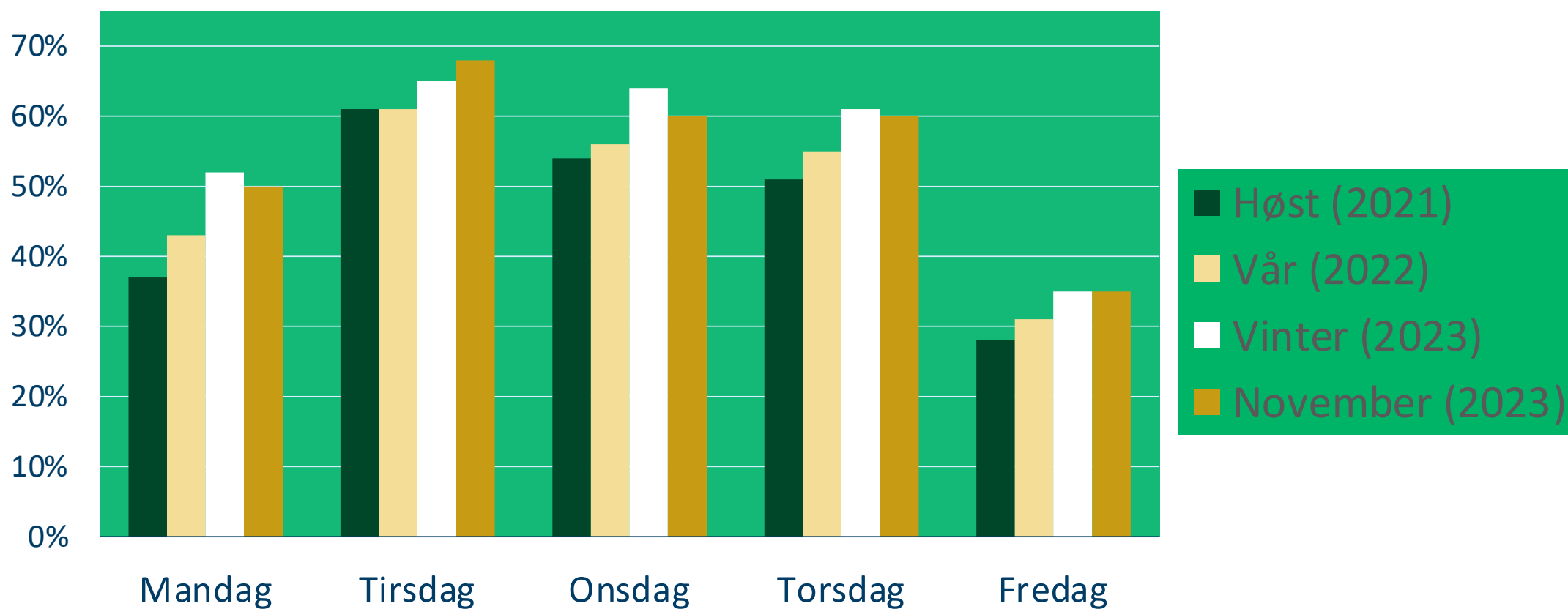


All six factors have statistically significant correlations with the current work arrangement

- Office presence correlates with six selected factors
- Males are more present onsite than female
- Norwegians are more present onsite than Swedes,
- Younger people are more present than older people
- Office presence in different departments varies, managers are more present than non-managers



Storebrand





More efficient working from home

More efficient working onsite

Time saving due to lack of commute

Flexibility

Better working environment at home

Better ergonomics onsite

Work-Life-Balance

Social interaction

Collaboration, togetherness

Access to resources

Team cohesion

Knowledge sharing

1-2 days

2-3 days

4-5 days



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Why go to the office

Comfortable workplace

Better (free) food, waffles, barista coffee

Company-paid sport activities, gym

Warmth, paid electricity

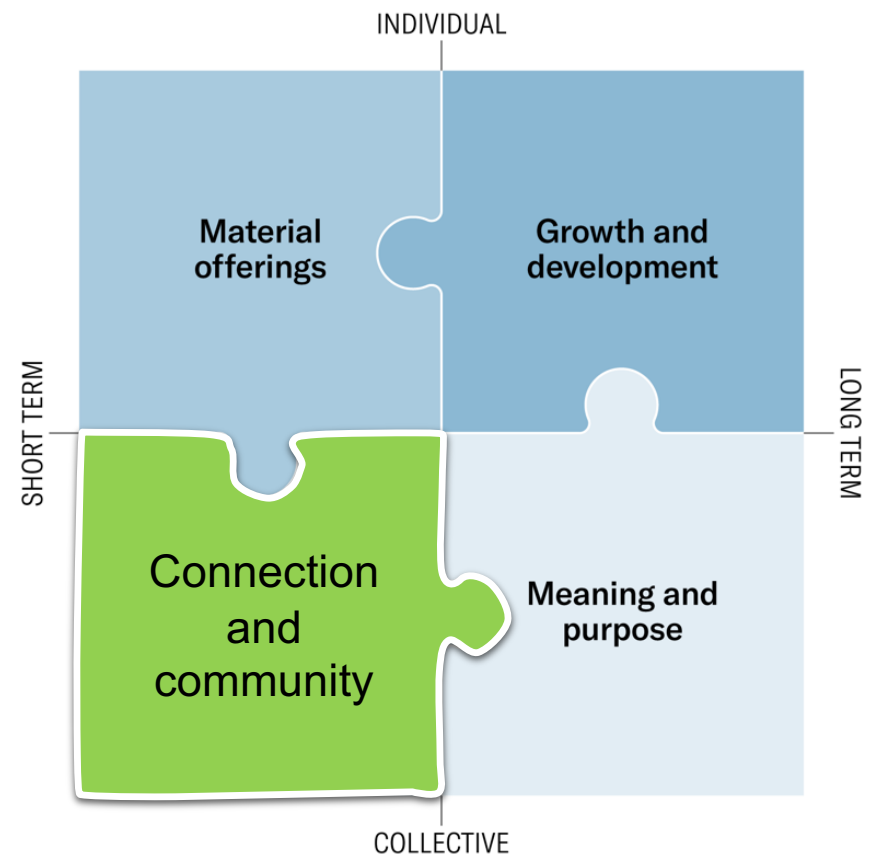
Support for commute (paid parking, subsidies commute)

Socialization with friends and colleagues

Sence of belonging, community feeling

Social events

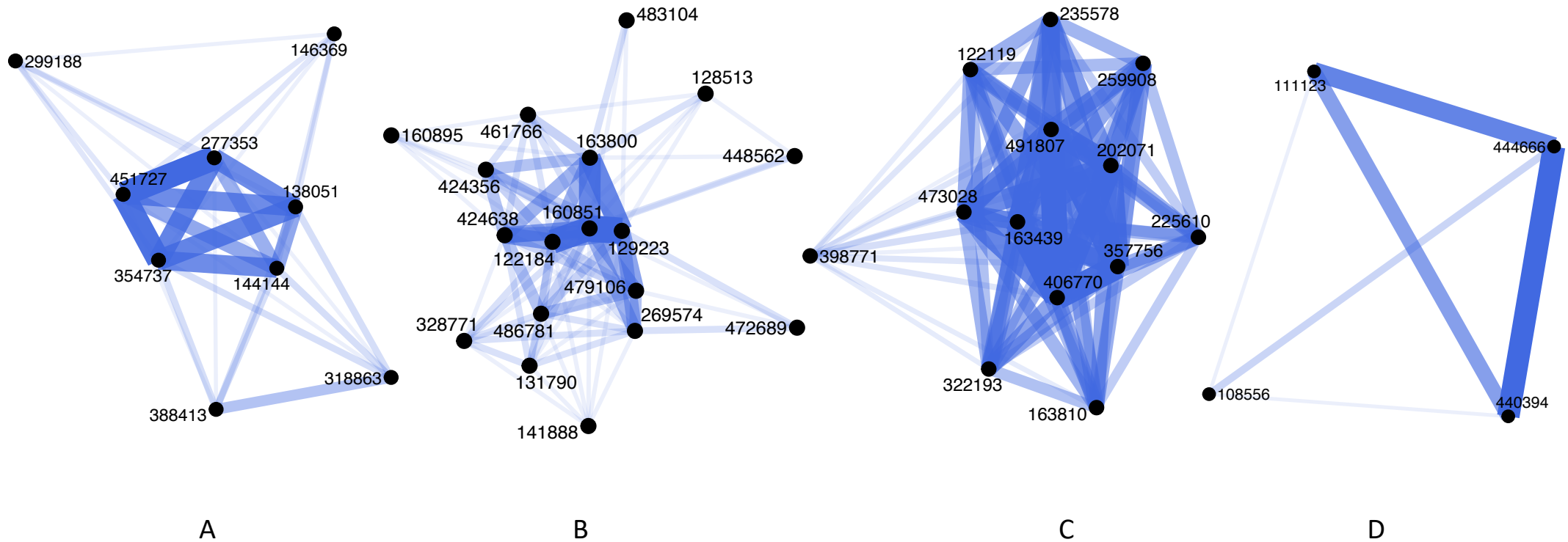
Spontaneous discussions



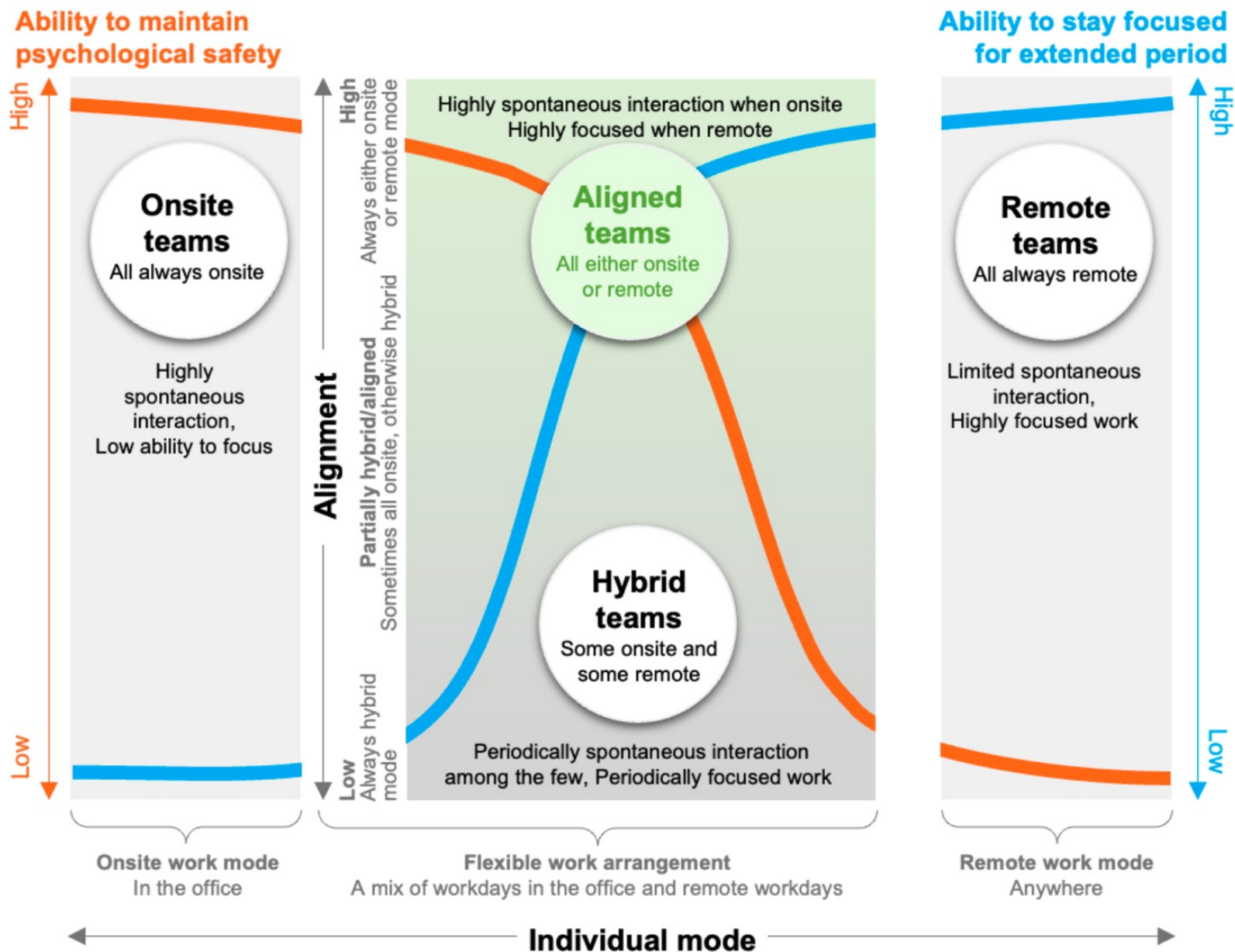
Spotify, Ericsson, Telenor, Knowit, Storebrand, Sparebank 1 utv



Attendance rate



Mean attendance rate does not portray co-presence or ensure collaboration





Psychological safety

Safe to be
honest

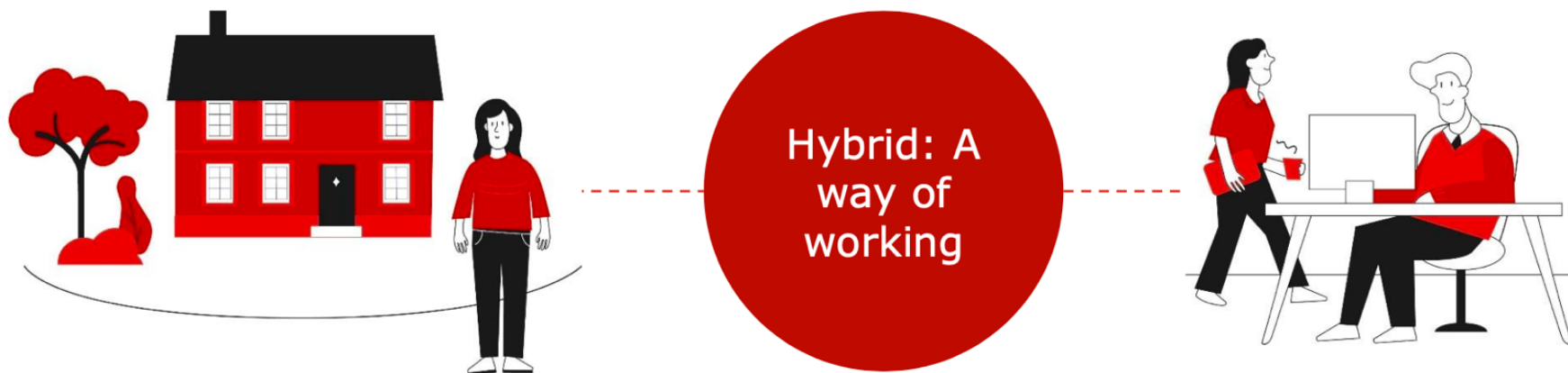
Safe to
make
mistakes

Safe to ask
for help

Valuing
each other

Tkalich, A., Smite, D., Andersen, N. H., & Moe, N. B. (2022). What happens to psychological safety when going remote?

Storebrand: Dilemmas not rules





SINTEF



Storebrand Tuesday

- Learn the joy of meeting people again
- Bringing buzz into the business (and the office)



Happy Friday

- Not to get more people into the Friday office, but to make the Friday office a nice place to be



The Monday

- Panta rhei...
- Monday is also a day!



Teknologi for et bedre samfunn