

DOMESTIC DIGITAL

A STUDY TO UNDERSTAND THE CHANGING NATURE OF WORK & HOME IN EUROPE

CONTEXT

NEW FORMS OF TECHNOLOGY HAVE
COMPLETELY CHANGED THE WAY WE LIVE,
WORK AND PLAY

NEW TECHNOLOGY PROVIDES OPPORTUNITY, BUT CONCERNS REMAIN

- ▶ AI and Machine Learning offer new opportunities and efficiencies, however raise concerns about trust, data, and job security
- ▶ The potential of new technologies doesn't always live up to expectations or match current behaviours
- ▶ Trust in new technology and the companies who provide it, is the lowest it's been in years



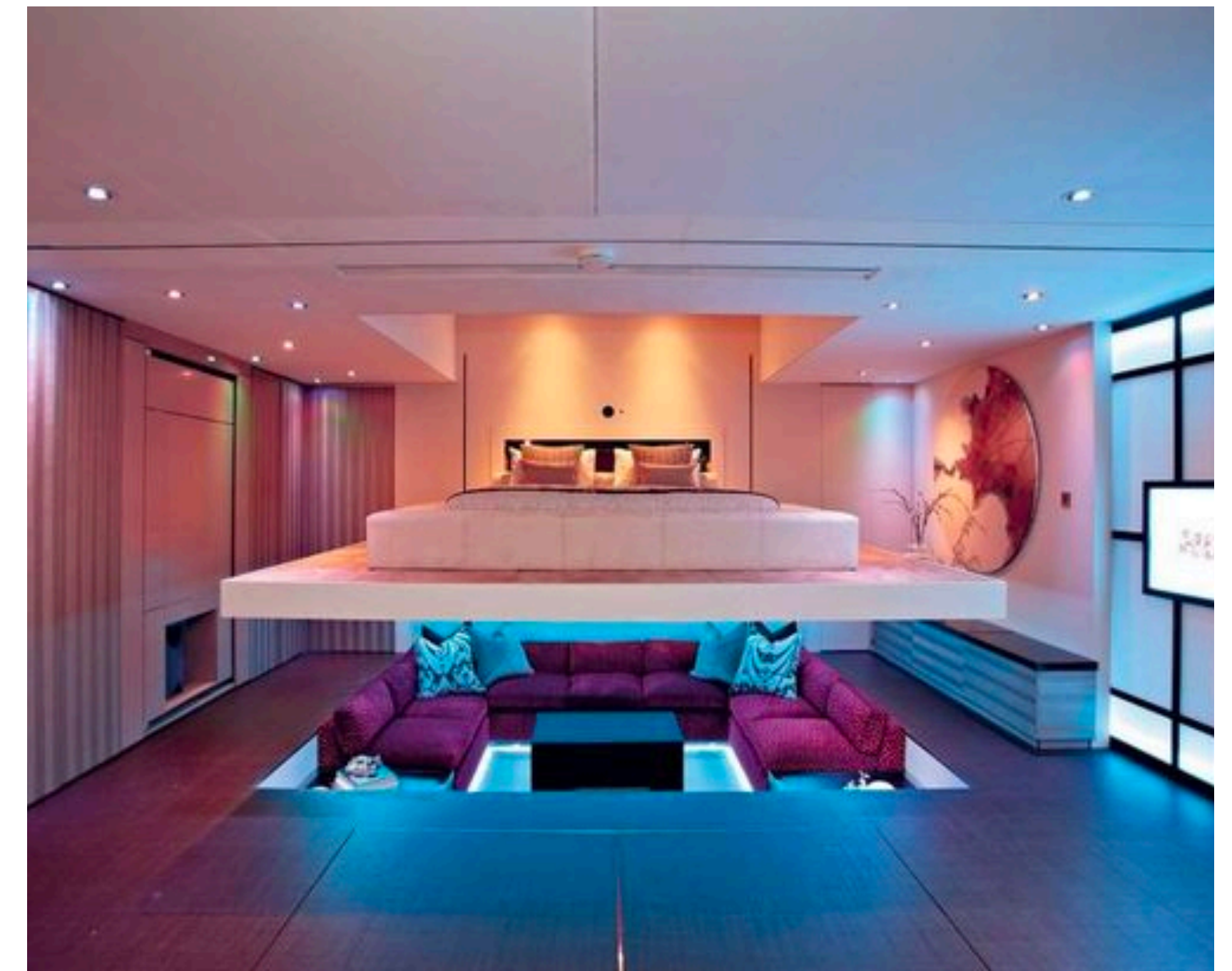
WITHIN THE HOME, ECONOMIC PRESSURES ARE CHANGING HOW WE LIVE

- ▶ The 'housing crisis' means people are living at home and in shared accommodation for longer
- ▶ Lower levels of home ownership has led to 'generation rent', with a lack of security and transient lifestyles
- ▶ Homes built today are the smallest they've been in 100 years



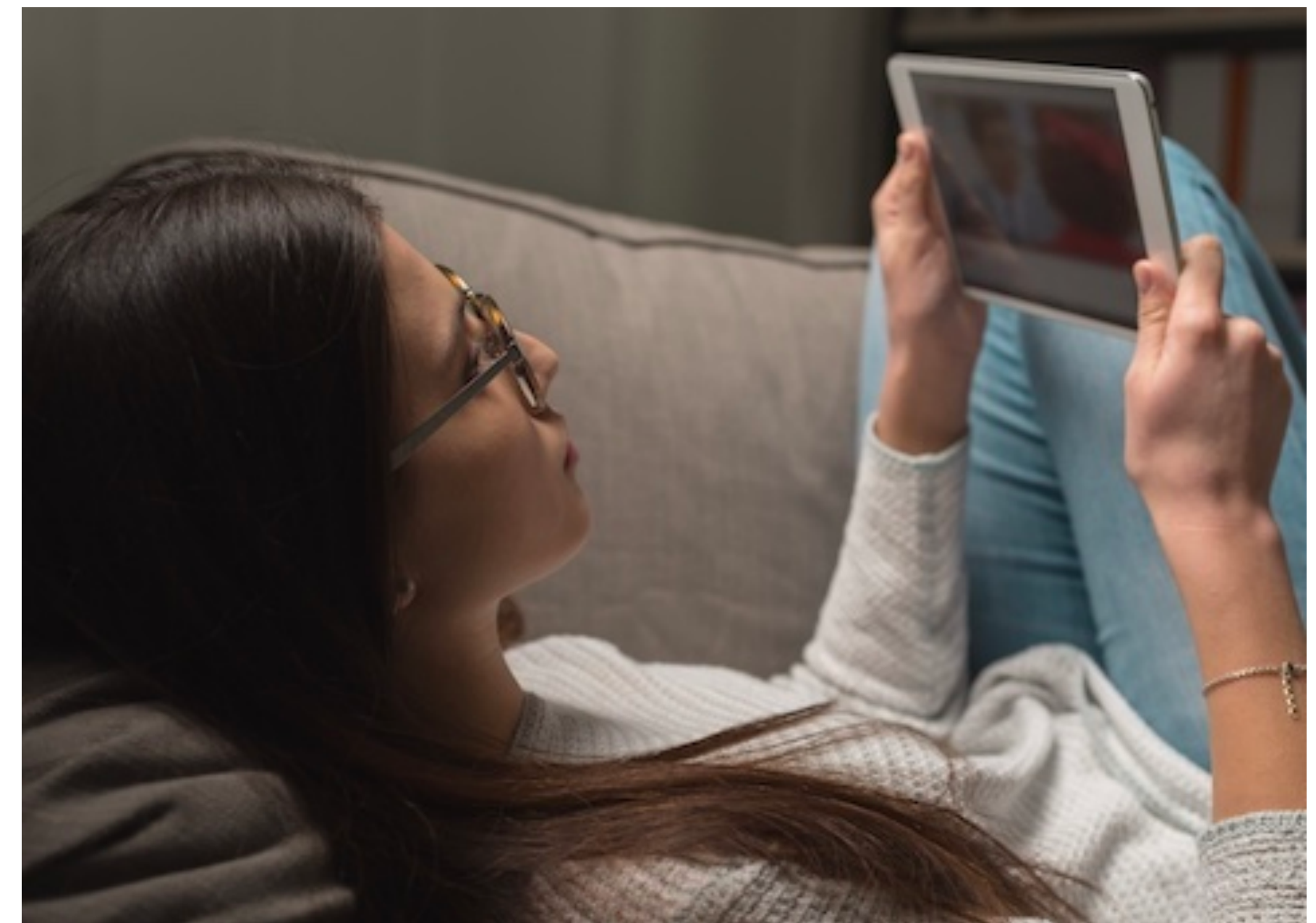
TECHNOLOGY IS ENABLING NEW WAYS OF LIVING

- ▶ Technology has changed our perception of space and entertainment, making rooms more undefined and multi-purpose
- ▶ Wellness is being incorporated into the design of new spaces, encouraging areas for relaxation over traditional entertainment spaces
- ▶ Automation has sped up household tasks, yet replaced working time for waiting time for services to be delivered
- ▶ The home has become the centre of multi-tasking as the boundaries between home tasks, leisure and work tasks blur



IN ENTERTAINMENT, ABUNDANCE OF CHOICE HAS LED TO COMPLEXITY

- ▶ New technology and services has allowed us to choose exactly what we want to entertain us. The portability of devices has also allowed us to consume content on the move.
- ▶ People are beginning to question their relationship with content and devices, particularly in relation to screen-time, sleep and wellbeing.
- ▶ Accessing entertainment can be a task in itself, as content has become so distributed and fractured. Subscription services, incompatible devices and abundant choice has led to complexity in personal entertainment.
- ▶ Consuming multiple forms of content, often at the same time and whilst performing other tasks, is now commonplace.



THE WAY WE WORK IS CHANGING

- ▶ Cloud based storage systems have enabled people to access data around the world on different devices - changing the dynamics of workflow within corporate teams
- ▶ Work tasks have become more focused on actionable items, with individuals being able to track progress with management software as well as detailed calendar systems
- ▶ Constant connection through messaging systems has led to more efficient communication, but at the risk of distraction and information overload.

COMPANIES ARE BECOMING MORE AWARE OF THE BENEFITS OF DIVERSE WAYS OF WORKING

- ▶ Working from home is on the increase (from 7.7% in 2008 to 9.8% in 2016 in the EU)
- ▶ Flexible working hours, increased vacation time, and improved maternity and paternity leave are all on the rise in Europe
- ▶ Attracting and keeping talent is a priority with companies offering more varied forms of benefits, from free food to corporate clubs and activities
- ▶ Companies are recognising the benefits of diverse teams working together



WE'RE ONLY JUST STARTING TO UNDERSTAND THE EFFECTS OF WORK ON WELLBEING

▶ Good:

- ▶ The conversation around wellbeing has opened up, with people talking about it more in the workplace
- ▶ Tools and strategies developed to deal with mental health and wellbeing in the workplace
- ▶ Policies in place at a governmental level e.g. French email law

▶ Not so good:

- ▶ Constant connection to work has encroached into our personal time, leading to pressures on families, mental health and exhaustion
- ▶ Professional / work pressures to perform beyond core job role, and in some cases tweet about it!



METHODOLOGY

QUALITATIVE INTERVIEWS WITH A DIVERSE
RANGE OF USERS AND KEY EXPERTS
ACROSS EUROPEAN REGIONS

A QUALITATIVE APPROACH TO GAIN AN IN-DEPTH UNDERSTANDING



Understanding The Context

Literature review and evidence search



Expert Interviews

Discussions with 6 leading workplace, technology and wellbeing experts



In-Home Visits

21 interviews and observations with people who work from home across regions, industry and demographics



Insight Synthesis

Workshops with design experts from Worktech and HHCD to synthesise insights and develop future directions

WE ENGAGED EXPERTS THAT ARE AT THE FOREFRONT OF WORKPLACE



Dr John Curran

Workplace anthropologist

John is a pioneering business anthropologist who specialises in workplace structuring



Alma Erlich

Researcher

Alma is a specialist researcher who helps individuals with complex design thinking methods



Ella Hafermalz

PHD work from home

Ella is a researcher with the KIN group and specialised in working from home practices in Australia



Neil Goulder

Marks & Spencer

Head of the smart working team at M&S, he specialises in the modernisation of new buildings and working areas



Matt Thomas

Wellcome

Matt is head of projects and development and specialises in building working groups and areas over a diverse work force



DARREN WALLINGTON
Crick Institute

Darren is head of Engineering at the Crick Laboratories, and specialises in custom built working areas for different science groups

THREE DISTINCT CONURBATIONS OF EUROPE



Malmö / Skanör / Sölvesborg /
Copenhagen

Sweden / Denmark



Grenoble / Annecy / Geneva / Nyon
/ Lausanne

France / Switzerland



London / Cambridge / Winchester /
Hove

United Kingdom

PARTICIPANTS

A DEMOGRAPHICALLY / ECONOMICALLY / TECHNOLOGICALLY DIVERSE GROUP

Paid / Unpaid Work

- How to quantify what should or should not be paid for

Technology Practices

- Innovators - early adopters - late majority

Full Time Hours / Part Time Hours

- Freelance - small business owners

Wellbeing Practices / Entertainment

- Mobile workers - home office workers

Age - Lifecycle Stages

- Younger starting career - middle age prime of career - approaching retirement

Relationships / Family Units

- Single - Relationship - Children

Sweden

- Malmö / Skanör / Sölvesborg

Denmark

- Copenhagen

France

- Grenoble / Annecy

Switzerland

- Geneva / Nyon / Lausanne

United Kingdom

- London / Cambridge / Winchester / Hove



Southwest
England



UK

Fiona
Claire
Sarah
Hilary
Paul
Edith
Sharon

Malmö/
Copenhagen



DENMARK

Thomas
Malte



SWEDEN

Pepa
Sofia
Malan
Lisa
Max

Grenoble/
Geneva



SWITZERLAND

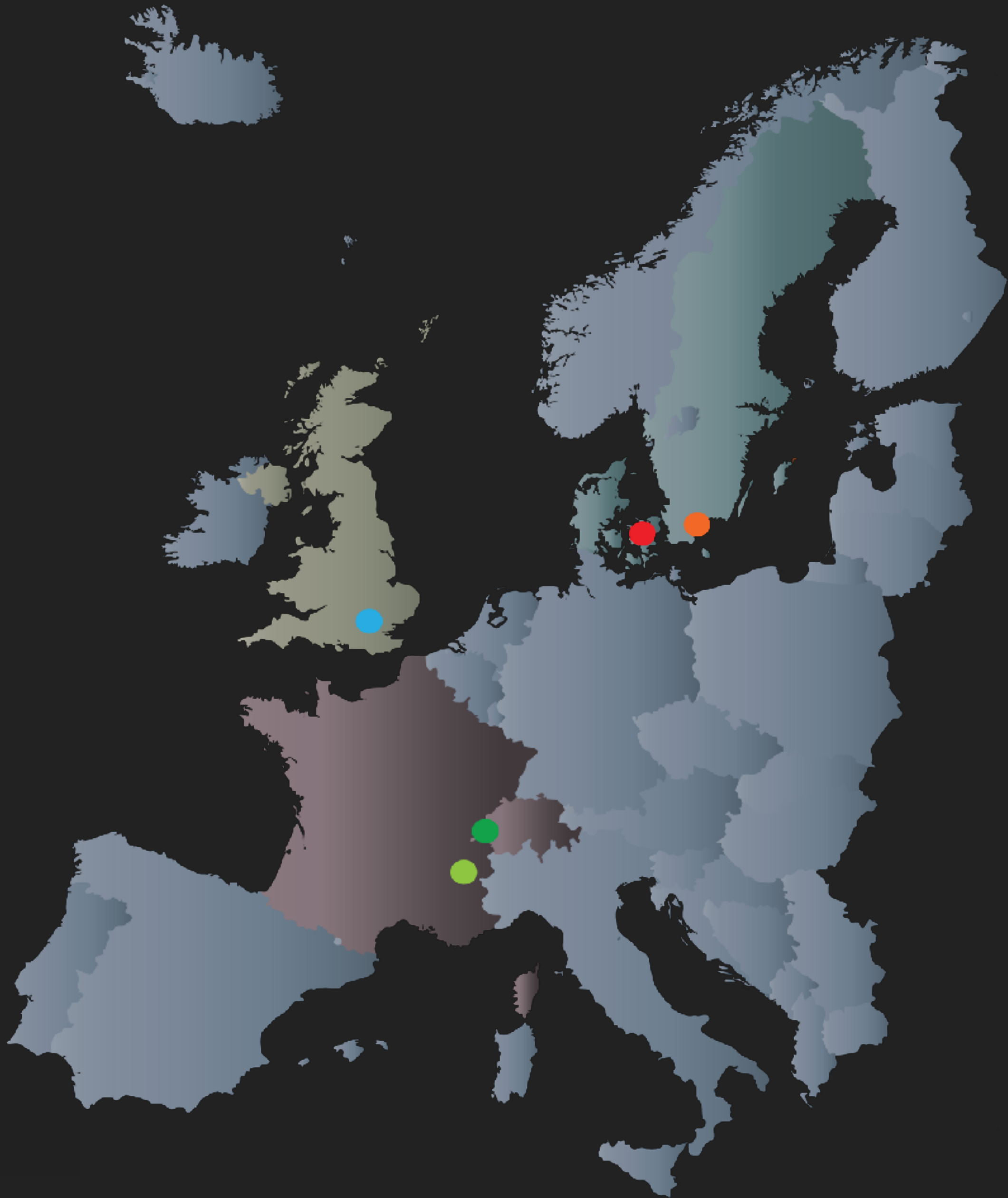
Serge
Pablo
Adam



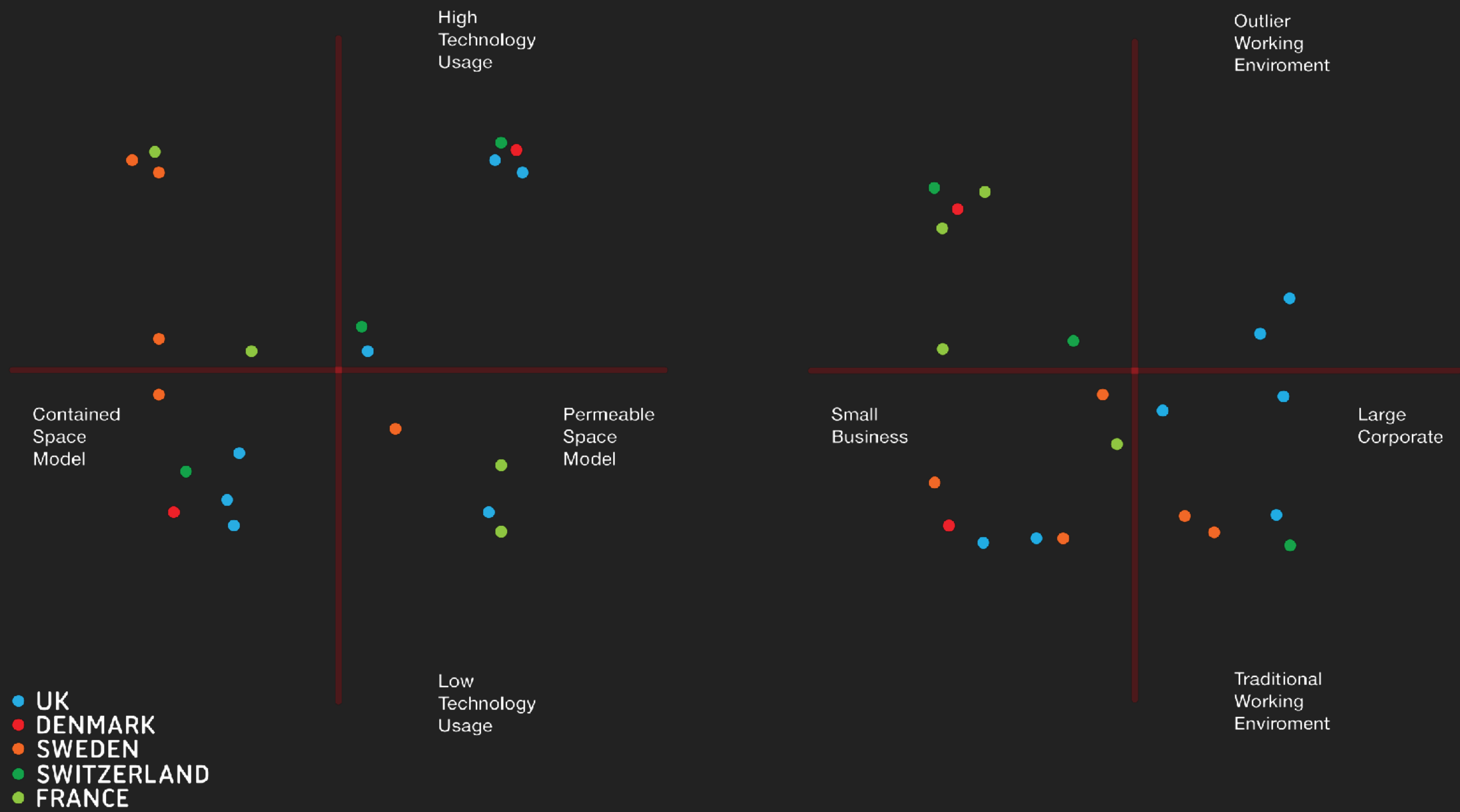
FRANCE

Januaz
Charlene
Tristen
Max

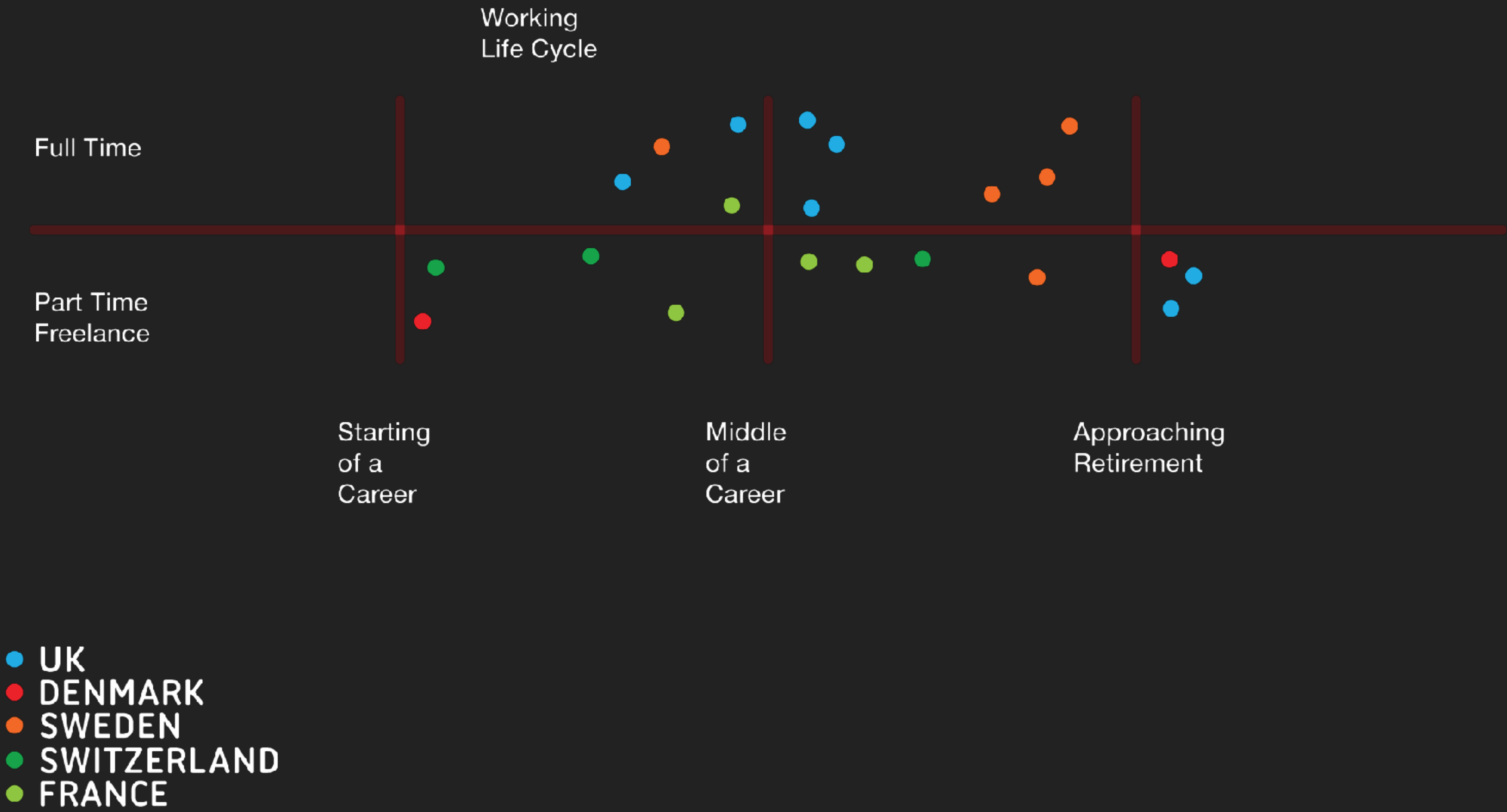
Country	Age	Relationship Status	Children	Job Description	Working Status
Sweden / Denmark					
Pepa	50	Married	2	Internet Technology Salesman	Full Time Home Worker
Sofia	34	Single	0	Economics Professor	Part Time Home Worker
Max	48	Married	2	Internet Technology Consultant	Full Time Home Worker
Malan	47	Married	2	Internet Technology Bid Writer	Part Time Home Worker
Lisa	45	Married	2	Small Online Business Owner	Full Time Home Worker
Thomas	58	Relationship	0	Freelance Researcher	Full Time Home Worker
Malte	25	Single	0	Lighting/ Experience Design	Mobile Worker
France / Switzerland					
Januaz	45	Relationship	0	Export and Import Salesman	Full Time Home Worker
Charlene	31	Relationship	0	Paragliding Importer	Full Time Home Worker
Tristen	38	Single	2	Sports Photographer	Part Time Home Worker
Max	29	Relationship	0	Seasonal Paragliding Instructor / Designer	Part Time Home Worker
Pablo	25	Single	0	Freelance User Interface Designer	Part Time Home Worker
Adam	57	Married	2	Business Development	Full Time Home Worker
Serge	27	Married	0	Principle Architect / Owner	Mobile Worker
United Kingdom					
Fiona	31	Relationship	0	Clinical Research Associate	Full Time Home Worker
Claire	45	Married	2	Global Communications	Full Time Home Worker
Sarah	48	Single	0	Senior Space Planner	Full Time Home Worker
Hilary	60	Married	3	Freelance Researcher	Full Time Home Worker
Paul	40	Married	2	Strategy and Transactions	Part Time Home Worker
Edith	61	Married	1	Freelance Researcher	Full Time Home Worker
Sharon	50	Married	2	Occupational Heath Consultant	Part Time Home Worker



The research maps show a fairly even distribution of participants in relation to the vectors being studied

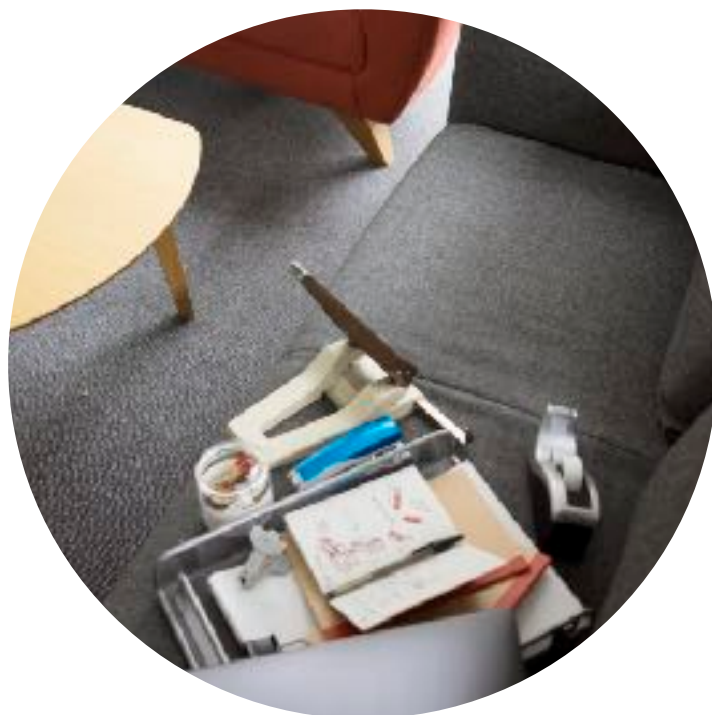


There is a good spread among participants in terms of different work mode and career stage



INSIGHTS

WE IDENTIFIED SIX DICHOTOMIES THAT IMPACT HOW PEOPLE WORK FROM HOME



Contained / Permeable



Urban / Rural



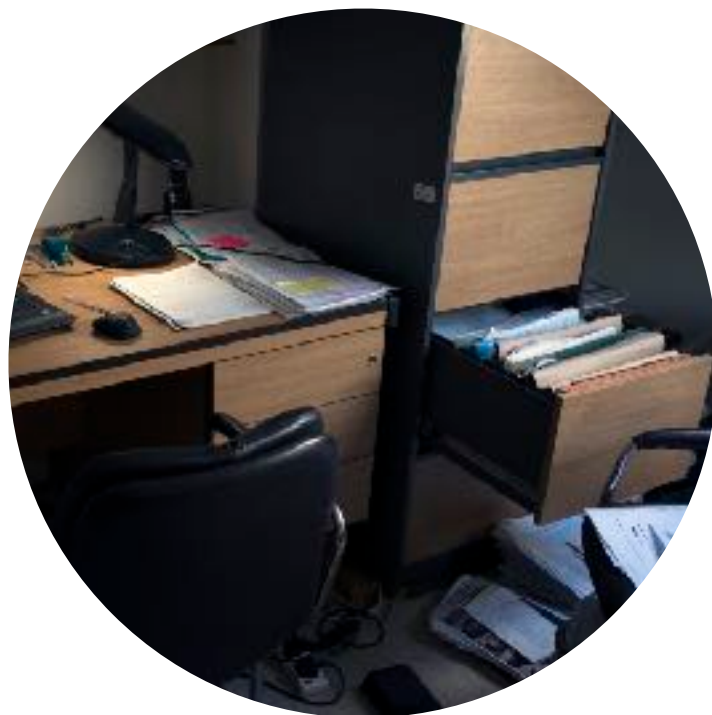
Personal Wellbeing /
Corporate Health



Mobile / Desktop



Wifi / Hotspots



Information Management /
Information Overload

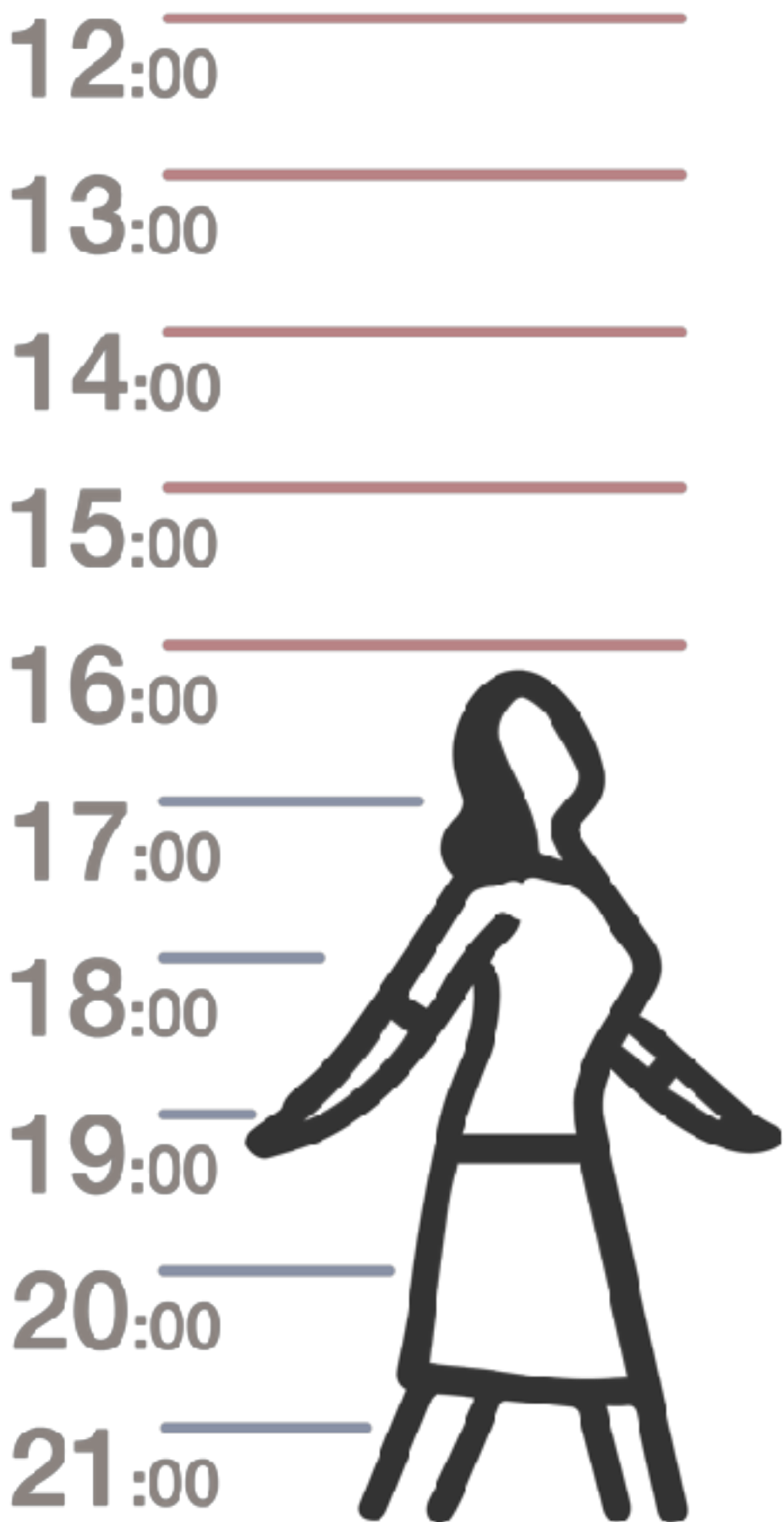
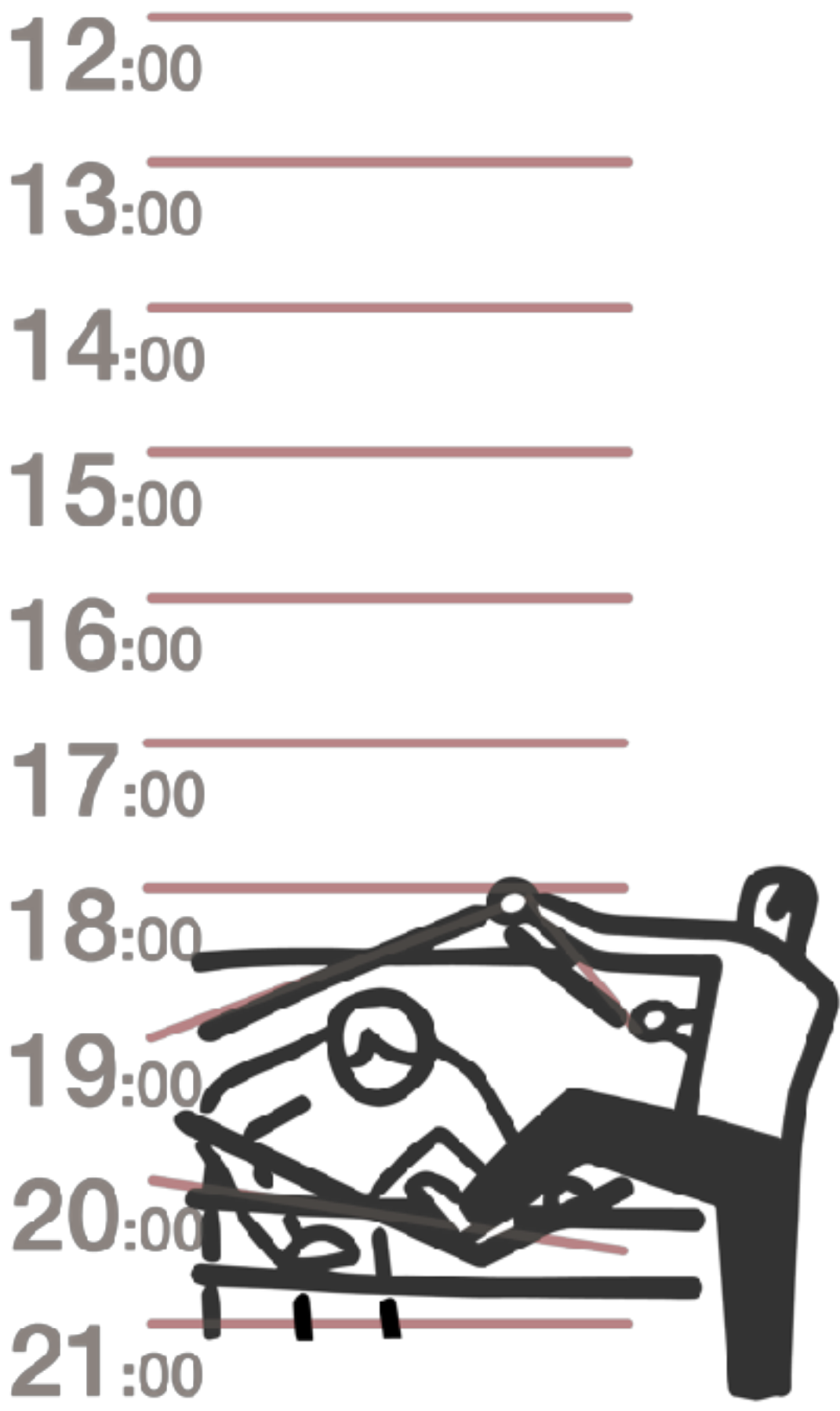
PEOPLE HAVE TWO PREDOMINANT WAYS OF MANAGING THEIR WORK / LIFE BALANCE

CONTAINED MODEL

A CONTAINED MODEL IS WHEN A PARTICIPANT HAS A STRUCTURED ROUTINE AND KEEPS A REGIMENTED SEPARATION BETWEEN WORK AND LIFE

PERMEABLE MODEL

A PERMEABLE MODEL IS WHEN A PARTICIPANTS LET WORK AND LIFE OVERFLOW INTO EACH OTHER, BREAKING DOWN THE BOUNDARIES BETWEEN TASKS



“I HAVE MY OWN BUSINESS, WORK IS CONSTANTLY ON MY MIND, EVEN WHEN WATCHING NETFLIX WITH MY CHILDREN I CHECK MY COMPANY INSTAGRAM FOR ORDERS AND COMMENTS...”

Lisa – Skanör – Sweden

**“LEADING EDGE POLICY IS STARTING TO
ADOPT REMOTE WORKING AS A
SOLUTION TO WORK STRESS...”**

Sofia – Malmö – Sweden

RURAL PARTICIPANTS HAVE MORE DEDICATED SPACE AND TIME

URBAN

THE URBAN PARTICIPANTS DID NOT HAVE A DEDICATED OFFICE, OFTEN WORKING IN LIVING ROOMS OR ON DINING TABLES. AS A WHOLE THEY WERE PERMEABLE WITH THEIR SPACE AND TIME



RURAL

THE RURAL PARTICIPANTS HAD A LARGER AMOUNT OF SPACE, BUT TENDED TO HAVE A GREATER CONNECTION TO THE NATURAL SPACE AROUND THEM,



**“I AM ALWAYS THINKING OF WAYS I CAN STILL WORK
AND SIT ON THE BEACH...”**

Charlene – Annecy – France

**“I FOUND MYSELF BEING VERY LONELY AND UN-
MOTIVATED, THERE IS NO SUBSTITUTE TO WORKING
WITH FRIENDS...”**

Charlene – Annecy – France

MENTAL HEALTH AWARENESS SHOULD BE PRIORITY ACROSS THE BOARD

CONTROL / WELLBEING	CORPORATE HEALTH	MENTAL WELLNESS	PERSONAL WELLBEING
THOSE IN PART-TIME, FREELANCE, JUNIOR POSITIONS FEEL THEY MUST ALWAYS PRIORITISE THE WORK AND FEEL THEY HAVE VERY LITTLE CONTROL	POLICIES TEND TO BE TAILORED AROUND PHYSICAL HEALTH IMPROVEMENT INSTEAD OF DEALING WITH THE GREATER PROBLEM IS OF STRESS AND ANXIETY	THE LONG TERM EFFECTS OF WORKING FROM HOME HAVE NOT BEEN TAKEN INTO CONSIDERATION, AND STEPS NEED TO BE TAKEN TO PREVENT BURNOUT OR LONELINESS	INDIVIDUALS ARE BECOMING MORE AWARE OF THE PITFALLS OF WORKING IN ISOLATION AND TAKING MORE STEPS TO BE ACTIVE

“WHEN I FIRST STARTED WORKING FROM HOME I WOULD FOLLOW THE SAME ROUTINE AS MY COLLEAGUE IN THE OFFICE, WHEN THEY GO RUNNING, I GO RUNNING...”

Pepa – Sölvesborg – Sweden

**“THE FIRST TWO WEEKS OF WORKING FROM HOME
WERE HORRIBLE...”**

Pepa – Sölvesborg – Sweden

INDIVIDUAL DESIRE TO BE COMPLETELY MOBILE, BUT TECHNOLOGY HAS NOT CAUGHT UP

MOBILE

MANY PARTICIPANTS, ESPECIALLY YOUNGER ONES, ARE MOVING TO USING LAPTOP AND MOBILE PHONES ON THE MOVE AS THEIR PRIMARY WORK TOOL, SOME RELY PRIMARILY ON THE BIGGER PHONES AS THEY FILTER COMMUNICATIONS

DESKTOP

VERY FEW HAVE DESKTOP COMPUTERS, BUT MANY ATTACH THEIR LAPTOPS TO HUBS AND SCREENS THEN USE IT LIKE A DESKTOP COMPUTER.

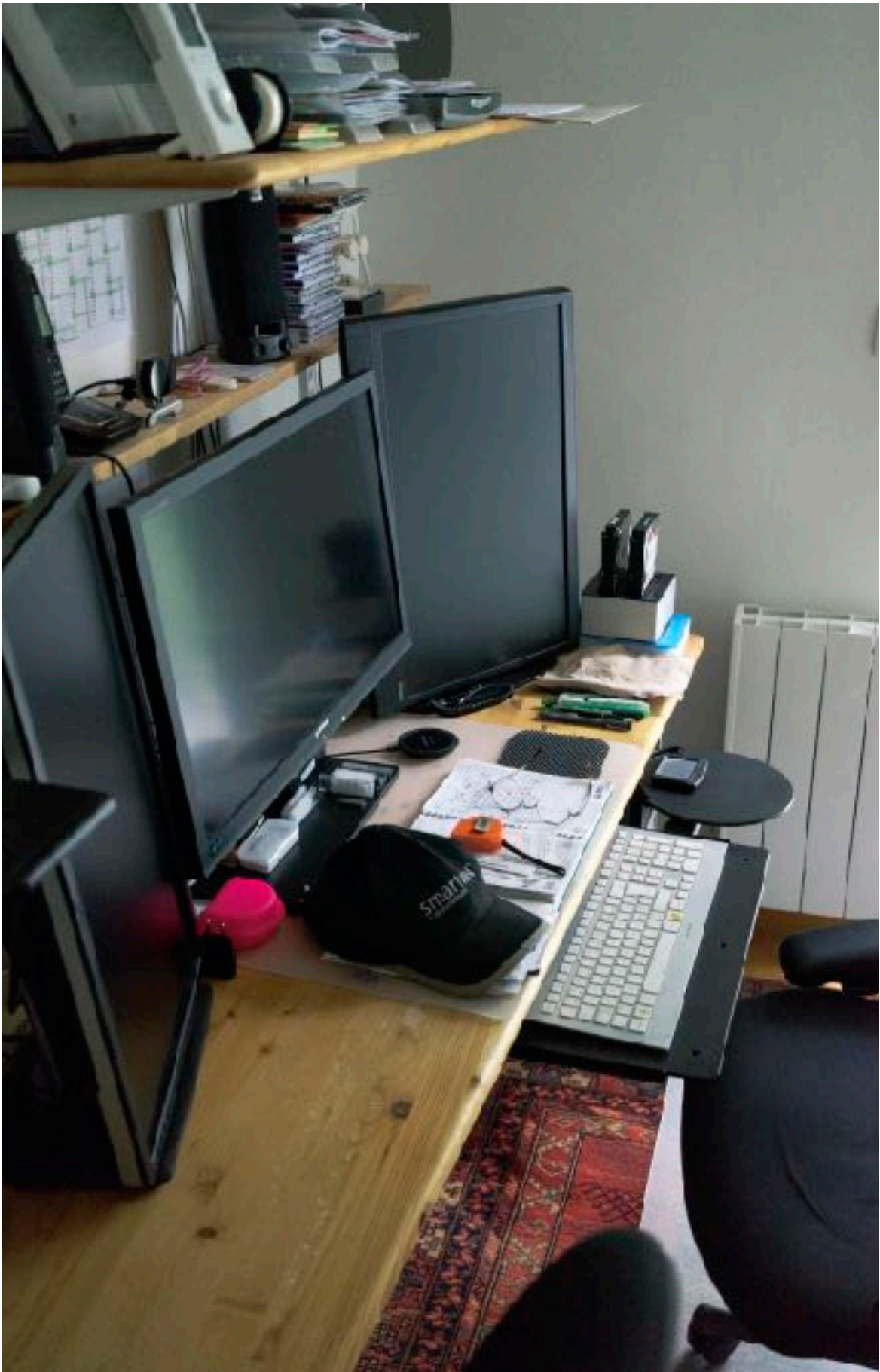
EXAMPLE SOFTWARE

WHATSAPP /SKYPE /GMAIL / OUTLOOK 365

EXAMPLE HARDWARE

THOSE WITH CREATIVE POSITIONS REFUSE TO USE ANYTHING BUT APPLE PRODUCTS

ALL OTHERS USE STANDARD MICROSOFT PLATFORM LAPTOPS PROVIDED BY THEIR COMPANIES



“AFTER GETTING BAD CARPEL TUNNEL I DECIDED TO CUSTOMISE MY COMPUTER TO LIMIT THE AMOUNT OF INTERACTION I HAVE WITH A MOUSE...”

Januaz – Grenoble – France

“I DO 80% OF MY WORK ON THE PHONE, FILTERING COMMUNICATIONS AND THEN I DRAW ON THE PDF’S WITH A STYLUS AND THEN THE ARCHITECT CHANGES THE AUTO CAD FILE...”

Serge – Geneva –Switzerland

SEAMLESS CONNECTION ARE AN EXPECTATION AND NOT A REALITY

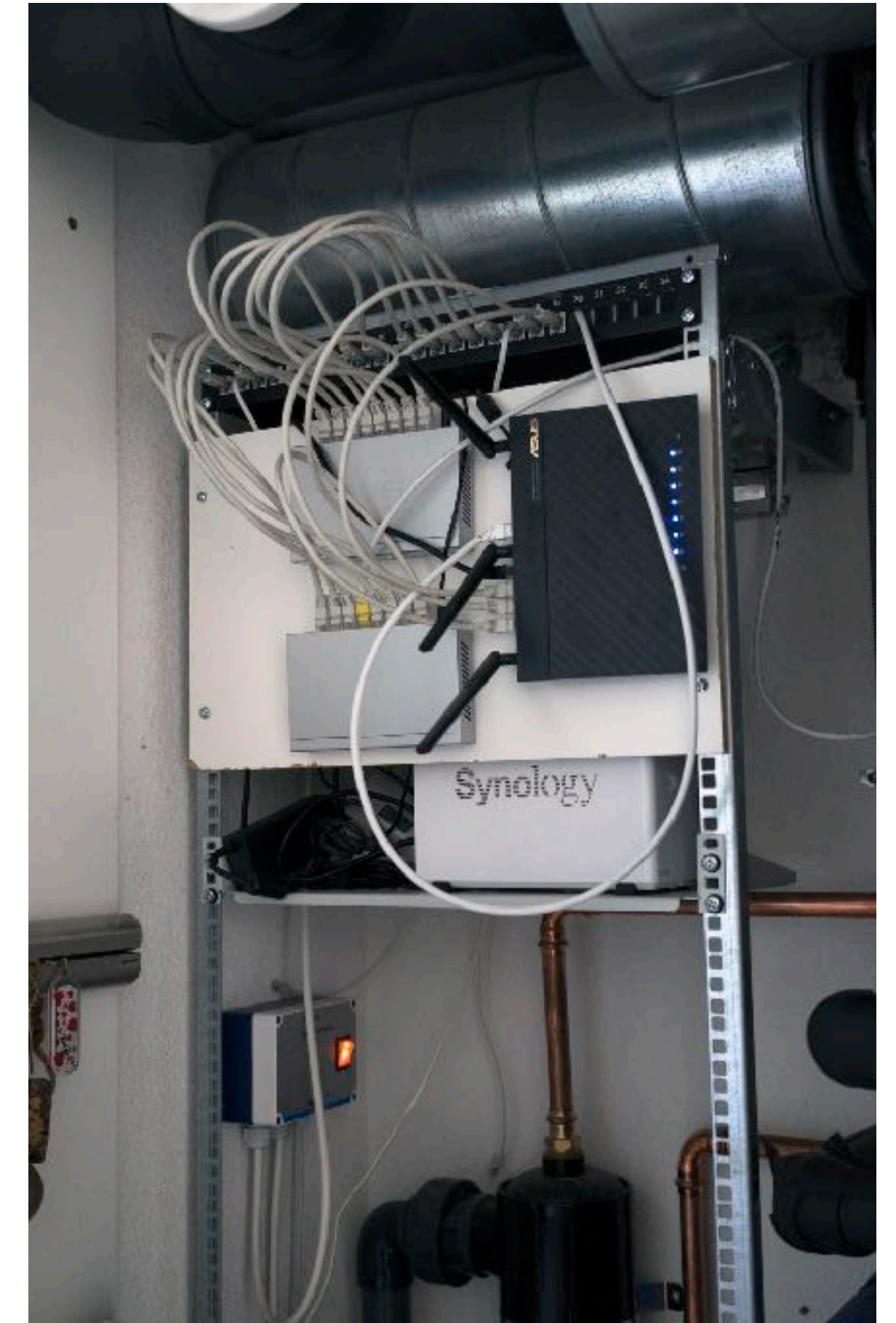
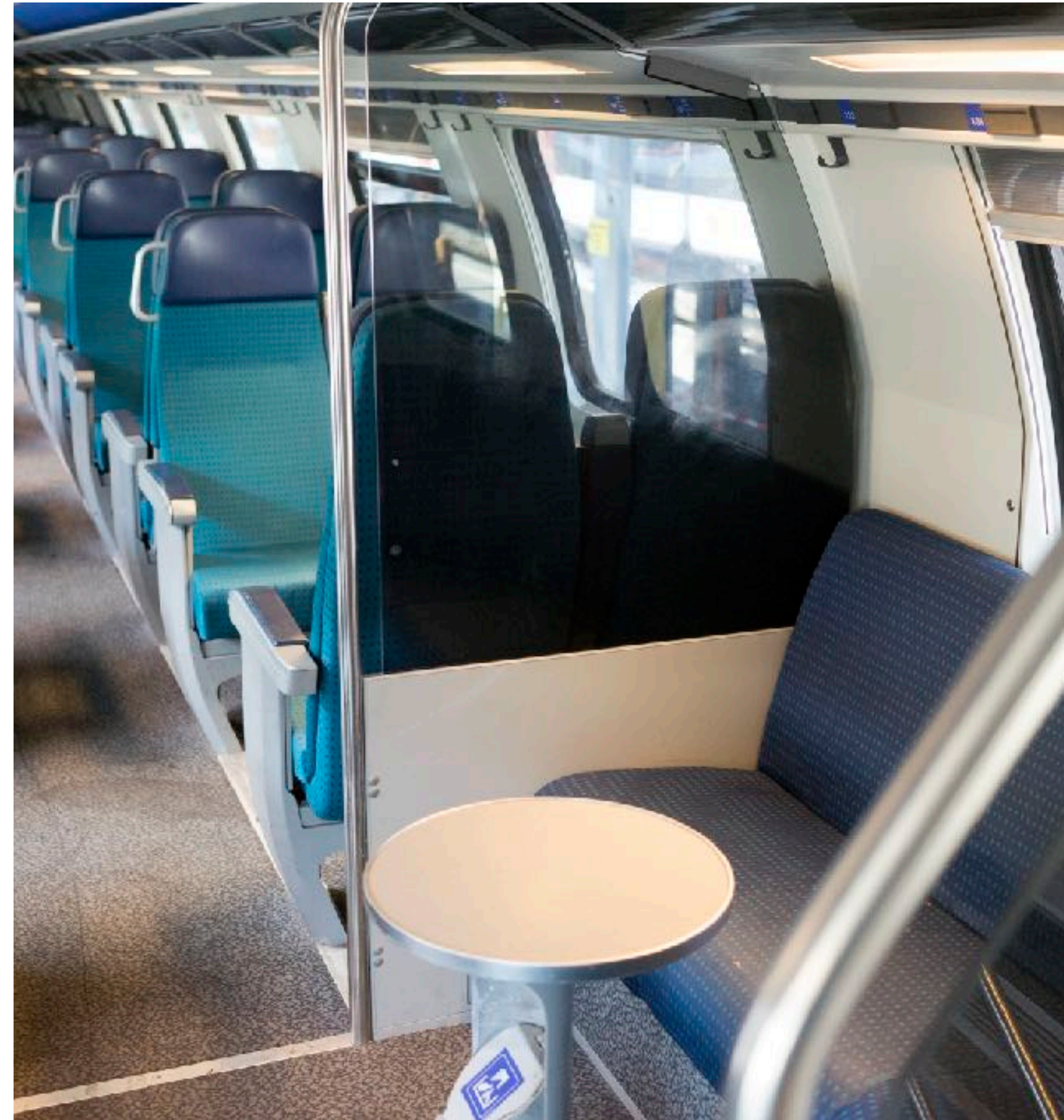
WIFI

WIFI IS STILL ONE OF THE BIGGEST ISSUES FOR ALL THE PARTICIPANTS IN ADOPTING CLOUD BASED STORAGE AS CONNECTION ARE SIGNIFICANTLY SLOWED DOWN

ALSO PUBLIC WIFI BANDWIDTH FOR MANY IS NOT ENOUGH TO A VIABLE WORKING PLATFORM UNLESS YOU ARE SIMPLY WRITING EMAILS

HOTSPOTS

HOTSPOTS FOR MANY HAVE A LOT OF POTENTIAL, HOWEVER HIGH COSTS AND UNRELIABLE CONNECTION DOES NOT MAKE THEM VIABLE FOR LARGE DATA TRANSFERS, AND THOSE STRAINING THE INFRASTRUCTURE OF MOBILE WORKERS



“I HAVE BUILT MY OWN PERSONAL VPN AND CLOUD STORAGE WITHIN MY HOME WHICH I CAN ACCESS WHEN I’M TRAVELING... THE WEAK LINK HOWEVER IS THE AIRPORT WIFI ALWAYS BLOCKS ME FROM IT...”

Max – Skanör – Sweden

“THE NEW SYNC CLOUD STORAGE KILLS MY INTERNET SPEEDS, WHEN IT’S ON I CAN BARELY OPEN AN INTERNET PAGE, AND IT JUST SEEMS TO BE CONSTANTLY SYNCING THE SAME THINGS...”

Serge – Geneva – Switzerland

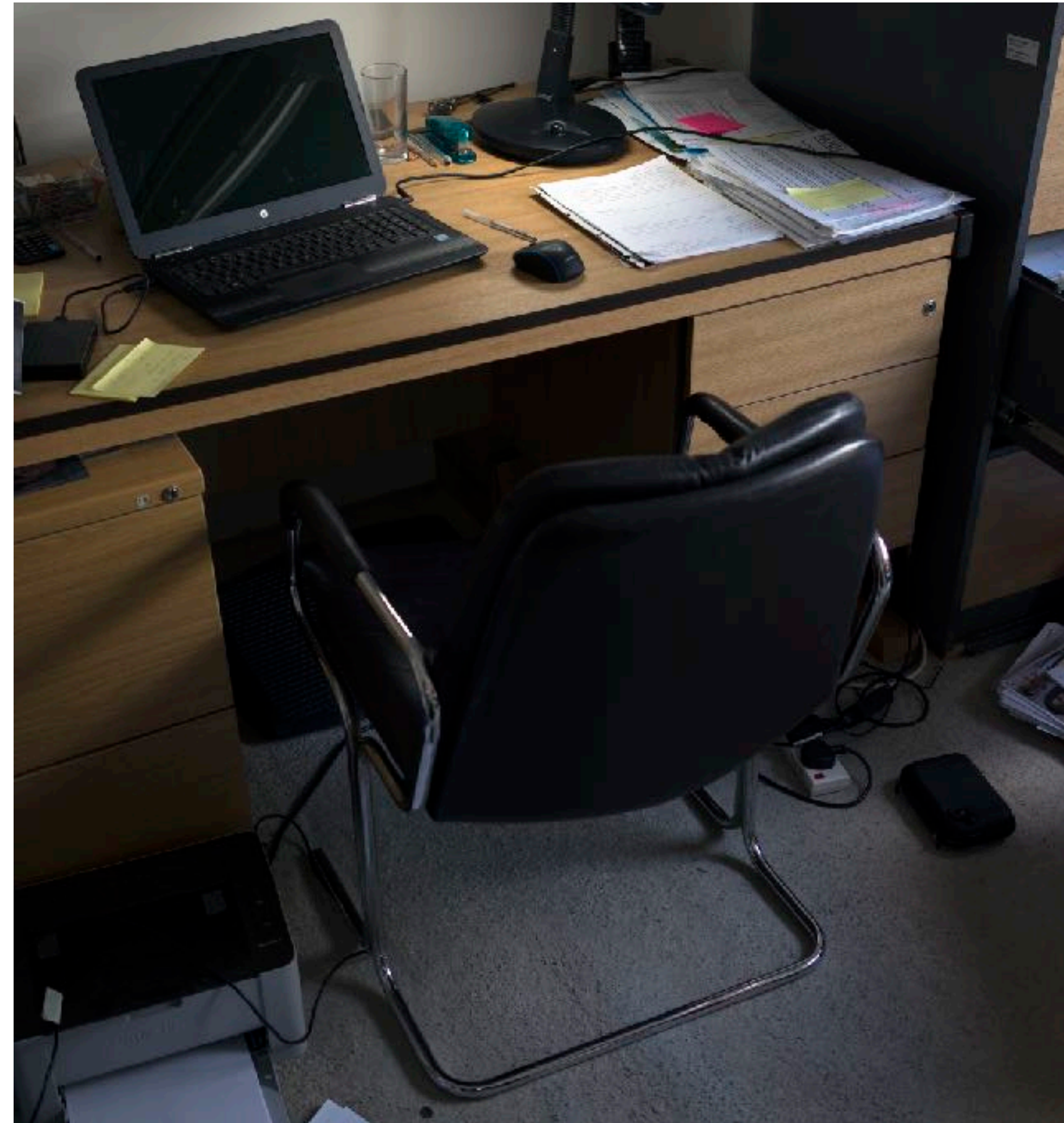
WORKING FROM HOME IS A COMPLETELY DIFFERENT FORM OF DISCIPLINE

INFORMATION OVERLOAD

IN RELATION TO A PERMEABLE WORK LIFE BALANCE THE INFORMATION OVERLOAD OF MANY PARTICIPANTS IS HIGH AS THEY ARE EXPECTED TO MULTI-TASK CONSTANTLY WITH DIFFERENT FLOWS OF INFORMATION

INFORMATION MANAGEMENT

IN RELATION TO A CONTAINED WORK LIFE BALANCE MANY USE DIFFERENT SYSTEMS FOR TRACKING DOWN INFORMATION TO WRITING TASKS ON NOTE PADS, OR MORE ADVANCED SYSTEMS OF COLOUR CODING EMAILS



“I AM CONSTANTLY HAVING TO CHECK DIFFERENT OUTLETS TO SEE IF MY FELLOW RESEARCHERS HAVE UPDATED A FILE, WE ARE NEVER ON THE SAME PAGE OR VERSION OF A PAPER...”

Edith – Cambridge – U.K.

“I FEEL I AM ALWAYS WORKING, IF THE STUDIO IS NOT SUCCESSFUL THEN I AM NOT SUCCESSFUL...”

Lisa – Skanör – Sweden

OPPORTUNITY AREAS

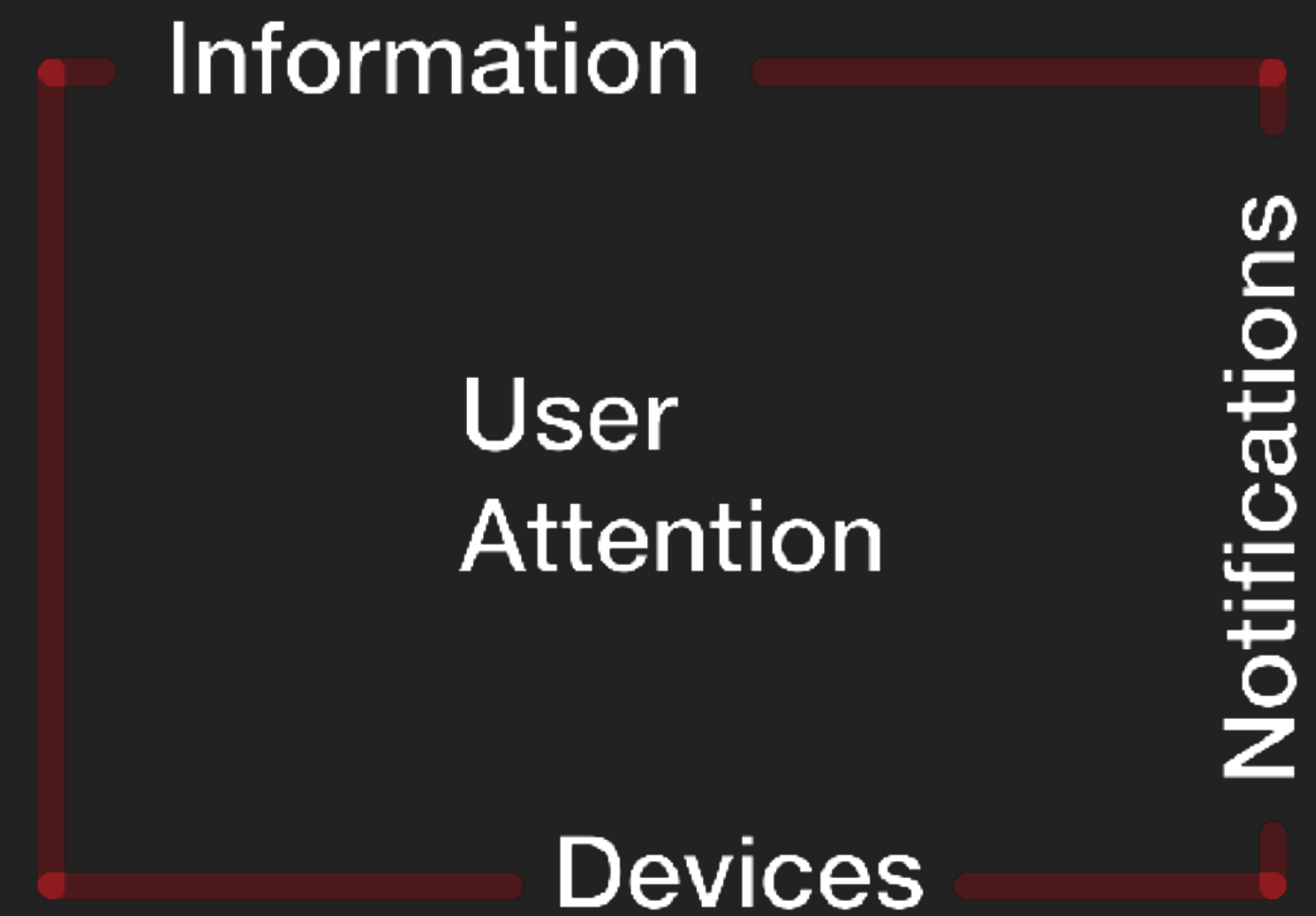
TECHNOLOGY THAT ENABLES

DEVICES WORKING WITH US?

MACHINE LEARNING WITH MOBILE OR LAPTOPS,
PROCESSING HABITS TO HELP CATEGORISE INFORMATION

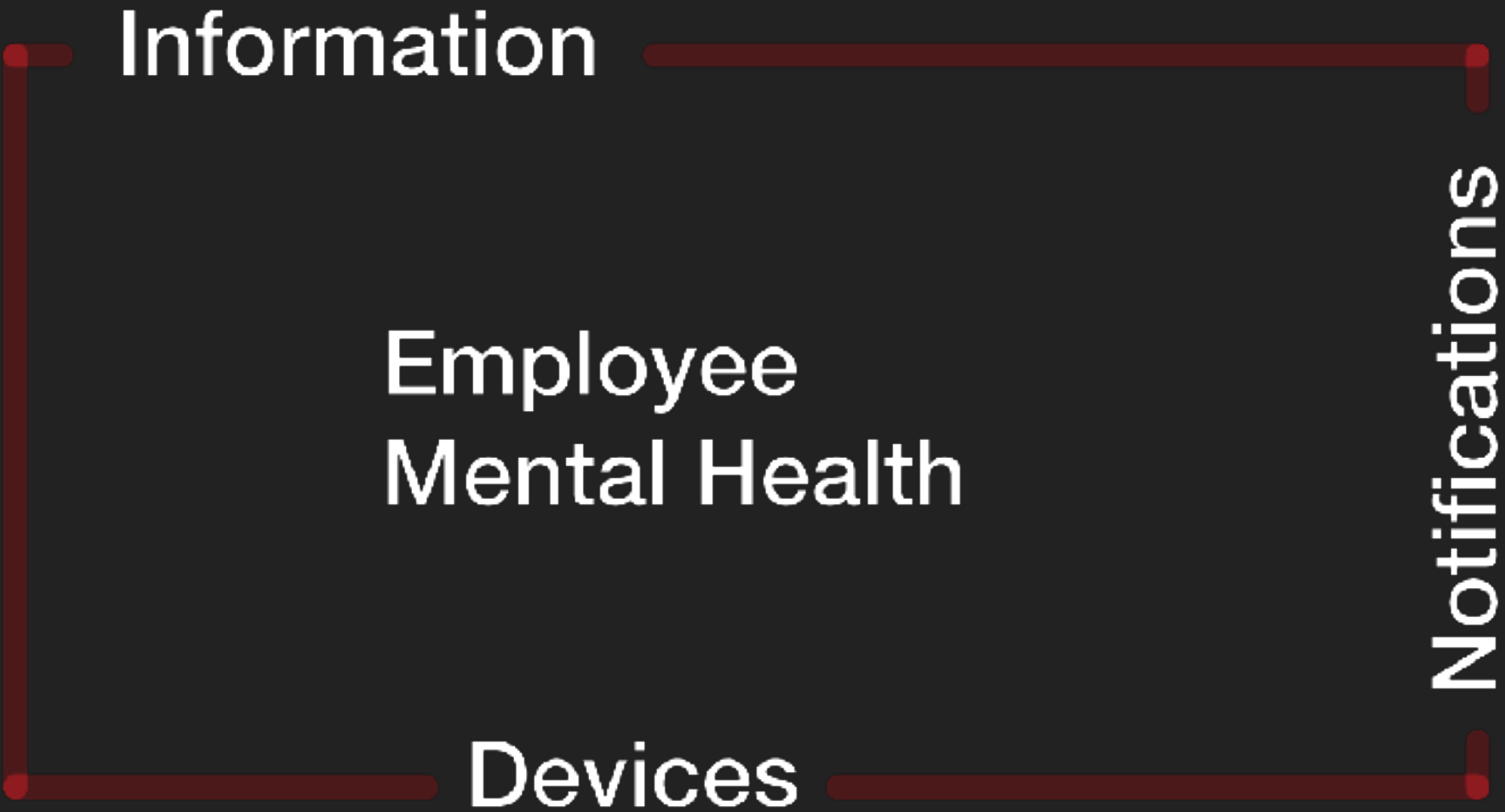
NOTIFICATIONS BEING MANAGED?

SOFTWARE THAT MANAGES NOTIFICATION FLOW AROUND
WORKING TASKS AND HAS DIFFERENT ABILITIES IN
CONVEYING THOSE MESSAGES



WORK STRATEGIES THAT EMPOWER

- TASK BASED ENVIRONMENTS?
- EMPLOYEE POLICY THAT ALLOWS FLEXIBILITY AND CONTROL OVER TIME AND SPACE
- EMPLOYEE MENTAL HEALTH CHECKS?
- REGULAR CHECK UPS THAT ENGAGE WITH LONGTERM MENTAL WELLBEING, RETHINKING THE ROLE OF CORPORATE HUMAN RESOURCES TO BETTER HELP EMPLOYEES



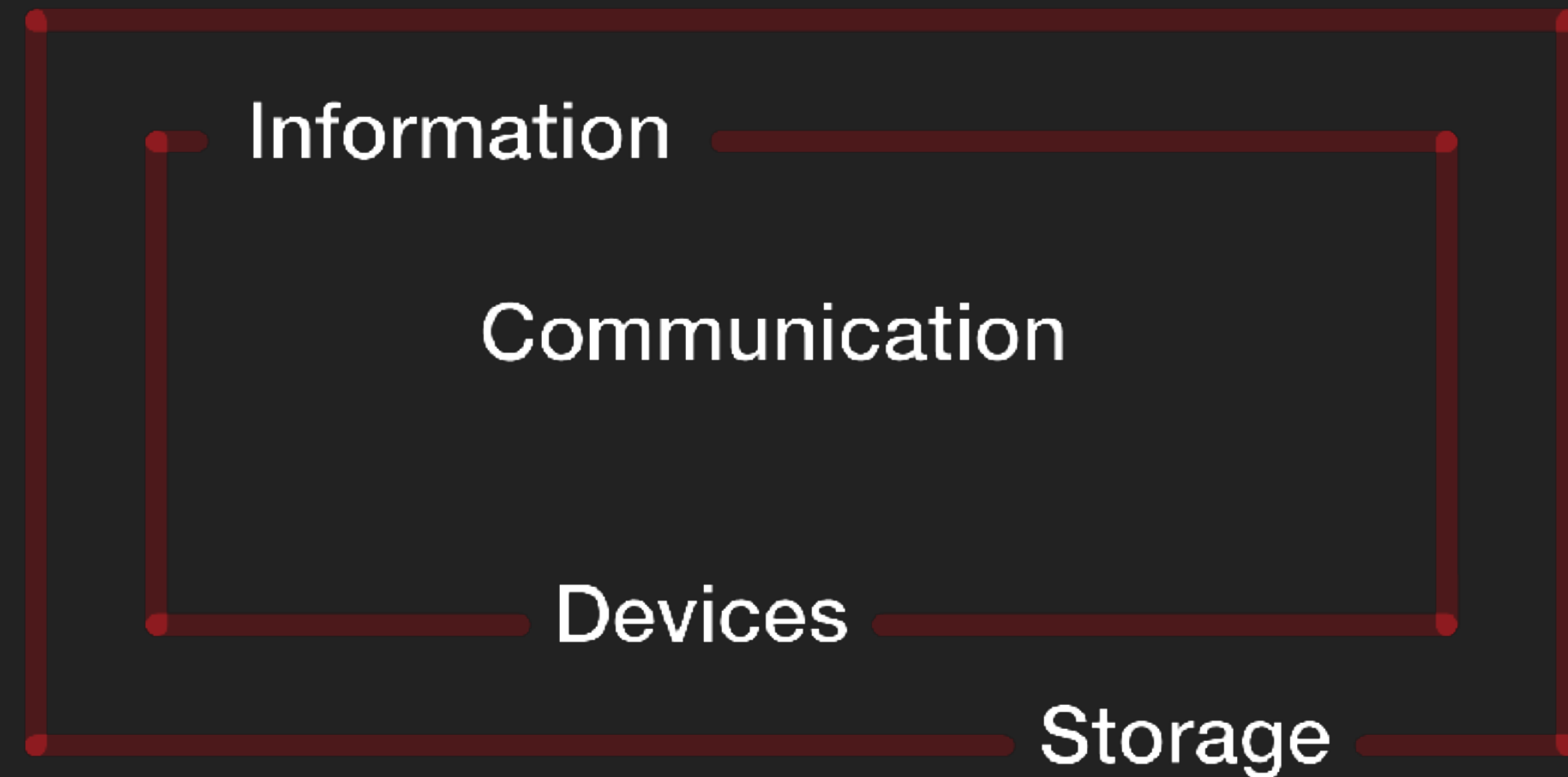
INFRASTRUCTURE THAT SUPPORTS

INFRASTRUCTURE RE-THOUGHT?

HOW CAN THE HOTSPOT BE IMPROVED, CAN IOT DEVICES BE USED IN CONJUNCTION WITH PRODUCING MORE EFFICIENT WIFI OR PERHAPS LIFI. HOW WILL 5G CHANGE HABITS

FILE FORMATS RECONFIGURED?

CAN THE WAY THAT CREATIVES CREATE INFORMATION BE CHANGED AS FILE FORMATS BECOME BIGGER AND BIGGER



INNOVATION OPPORTUNITIES

FUTURE SCENARIOS

VOCAL TECHNOLOGY

- ▶ Clear information flow that can be set at different speeds and intervals
- ▶ Contained information and restrictions of notifications as not to disturb someone with vibrations or sound alerts
- ▶ Mobile workflow limiting the amount of screen viewing in transit





JELLY BEAN STATUS

- ▶ More icons than just 'available' or 'busy', more detailed levels of interaction
- ▶ Keeps a level of communication with others both physically and virally of their frame of mind
- ▶ Limits unnecessary disturbance from others and thus aid concentration





ENVIRONMENTAL TRACKING

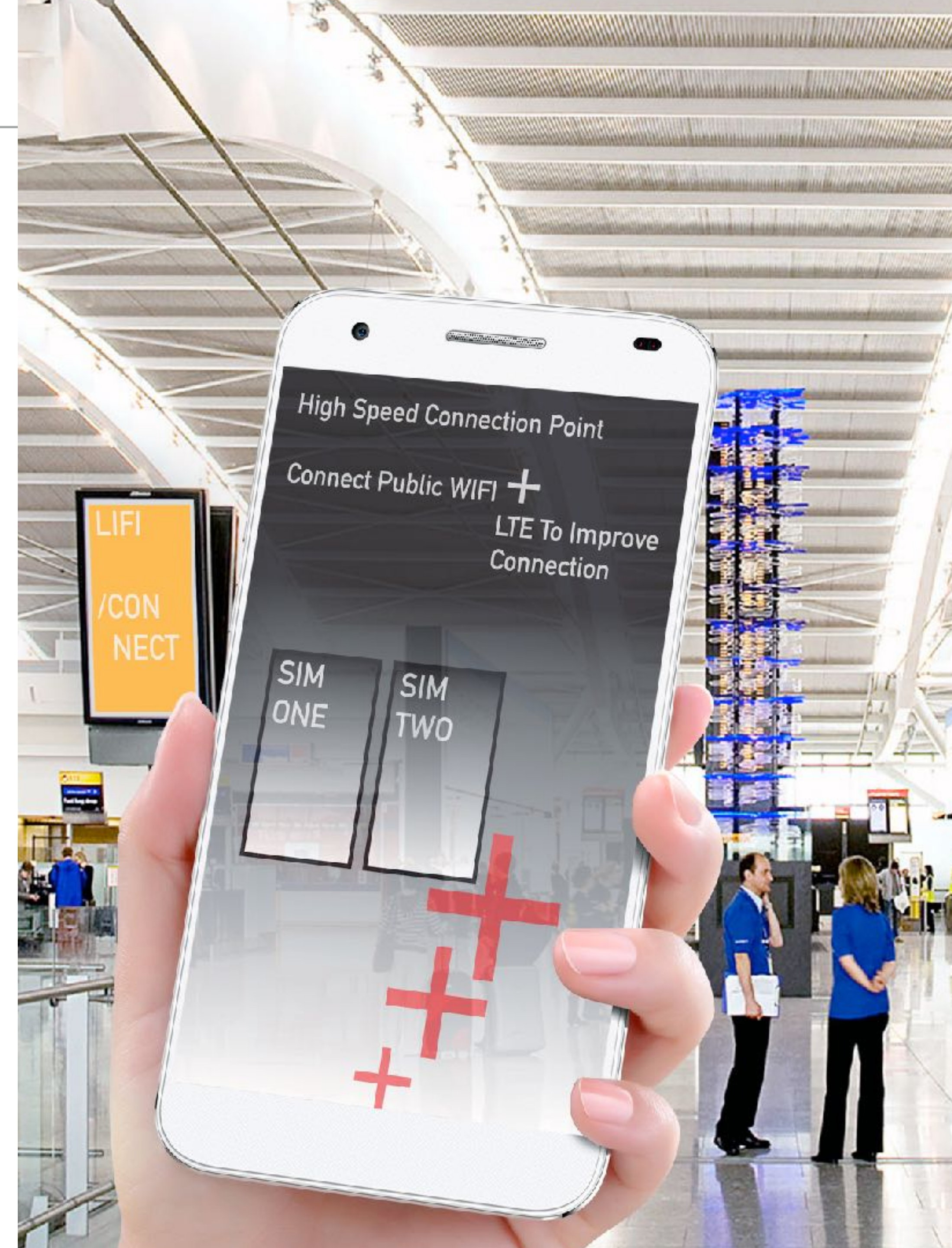
- ▶ Keeps users aware of their environments and how it can change throughout the day
- ▶ Allows for interaction and information on how to improve an environment - what are the micro and macro steps?
- ▶ A tool that gives health advice based on working practices
- ▶ Could be used in conjunction with a calendar, so that a user can know what times are the best for certain tasks





SMART HOME WIFI / 5G HOTSPOT

- ▶ Combining different networks and building on original infrastructure without complete overhauls
- ▶ Encouraging seamless mobile workflow when individuals are on the move
- ▶ Can be managed by background software to create different readable file formats that work with different levels of connection



Boulangers



SURFACE TRACKING

- ▶ Can be used for different types of workflow and does not require an individual to constantly minimise windows
- ▶ Can allow individuals to work together without always watching a constantly updating computer screen like some modern cloud based workflow
- ▶ Suddenly any surface can become a workable surface opening up changing spaces within homes



2019

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31	31	31



THANK YOU

FEEL FREE TO ASK MORE QUESTIONS – ROBERT.THORE@NETWORK.RCA.AC.UK
