HOME NOOK

Rethinking the Remote Workspace
Olivia Larson - Senior Project | Iowa State University | Spring 2021

How might we introduce flexible work spaces into the home so that it is better equipped for remote work?



Introduction

How might we introduce flexible work spaces into the home so that it is better equipped for remote work?

Since the stay-at-home orders starting in March of 2020, there has been a monumental shift to work from home. In fact, **84% of workers report that they want to continue telecommuting** (at least part-time) even after the pandemic.

With today's advanced technology, companies have been able to largely support this shift while maintaining their operations, some of which, even extending the option to work remotely (at least part-time) post-pandemic.

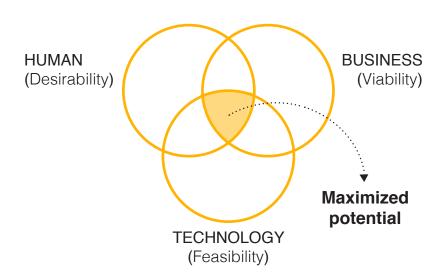
As we begin to move from the emergency phase of reacting to COVID-19 to longer term planning, it is worth understanding the employee's remote work environment as it relates to their comfort, performance and satisfaction.

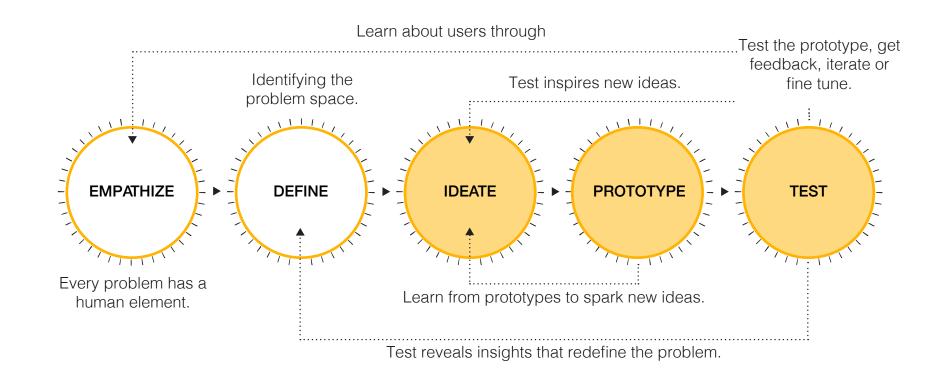
Researchers have learned that "spaces can be designed to produce specific performance outcomes—productivity in one space, say, and increased innovation in another, or both in the same space but at different times" (Workspaces that Move People, Harvard Business Review). This is why so many companies have aimed to redefine the workplace, recognizing that some of the most innovative ideas are not taking place in a cubicle. Think: standing desks, flexible workplaces, and in-office yoga studios.

However, there is a significant gap between the progress being made within office walls and that of the at-home workplace. I believe that the research, knowledge, and technology is there, but it has yet to be integrated into the home environment, and it must be affordable (and desirable) to the individual worker in order to succeed.

Project Plan

& The Intersection of Innovation



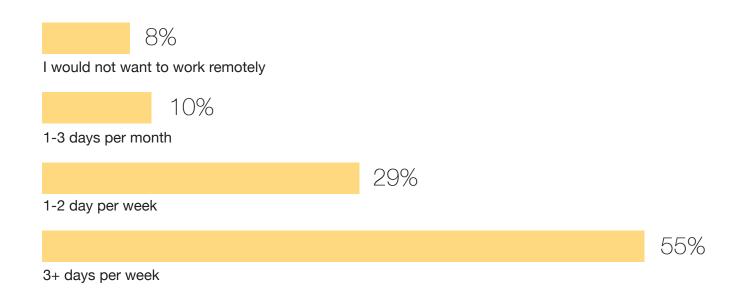


Significance

Current Situation

Since the beginning of the COVID-19 pandemic, there was a monumental shift to work-from-home. Companies have been able to largely support this shift while maintaining their operations, some of which, extending the option to work remotely (at least part-time) even after the pandemic. Statistics show that remote work is here to stay.

Over half of employees want to work remotely three or more days a week.



Q: If COVID-19 was not a concern, how often do you think a typical employee needs to be in the office, if at all, in order to maintain a distinctive culture for the company? I Totals do not add up to 100% due to rounding. Source: PwC US Remote Work Survey I January 12, 2021. Base: 133 US executives



4 in 10 U.S. workers are now working remotely full-time.

Source: Review42.com I February 4, 2021

Mind Map Brainstorm

Storage

Exploring the problem space... Enables shift in "Space mindset mindset" What are these different Re-configure space for tasks and what are the Thinking & working different tasks? **Variety of seating** patterns? Work vs. rest outside traditional office/ options associated cues cube Living **Different spaces for** room Remote vs. office Trends different tasks Individual Basement environment focus Cafe Kitchen style How might we better Common Home Flex Home equip the home for Bedroom Collaborative environment space remote work? Lounge One office Physical **Isolation of** Limited One office and/or desk and/or desk proximity to home office space opportunity to others How do Common re-locate Hallways we define a spaces workspace? Meeting Limited rooms In front of clutter: "WeWork" working to-do's, sticky notes, Collisional spaces Physical conversation monitors... Movement/ Movement What does a workspace comfort thinking stimulates creative mean to different people? relationship thinking What are the Importance patterns? of design and External Temperature modularity of different stimuli Desk, Meeting room, "Short walk Prompt spaces cafeteria, coffee shop.. breaks" re-location Limited by home environment, Lighting less varied layout Seating

The opportunity

How might we introduce *flexible work spaces into the home so that it is better equipped for remote work?

*Flexible work spaces, meaning different types of work environments

Questions-Methods Table

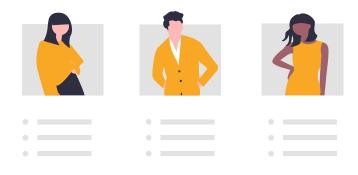
Based on the three factors of integrated innovation....

Innovation Factors	Research Questions	Research Methods	Expected Outcomes	Methods for Visualization
What is desirable to the Business?	Who are the main market competitors?	Web search, consumer reports	Product position	Product benchmarking
	What is the primary user demographic?		User Categories	Collect and visualize demographic information.
Users	What are some of the needs and desires of remote workers?	User interviews	Understanding needs, wants, desires user personas	Personas, empathy map, journey map
	What do the various environments look like?	User interviews + contextual images	Understanding environmental factors	
Technology	What is the core technology required for this topic?	Literature review, web search	Understanding of current technology used to make these products.	Technology benchmarking

Secondary Research - Methods







PRODUCT BENCHMARKING

IDENTIFYING STAKEHOLDERS



Literature Review - The Four Work Modes

According to Gensler, there are four modes of activity that take place during work, remote or not.



FOCUS

Individual work involving concentration and attention devoted to a particular task or project.



LEARN

Acquiring knowledge of a subject or skill through education or experience.



SOCIALIZE

Interactions that create trust, common bonds and values, collective identity, collegiality and productive relationships.



COLLABORATE

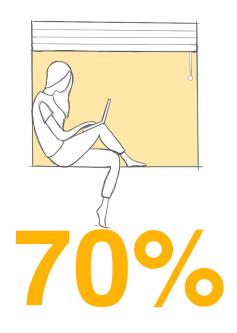
Working with another person or group - in person, via technology or a combination of both - to achieve a goal.

Source: Focus in the Workplace I Gensler I January 24, 2012

Literature Review - Steelcase Survey

According to Steelcase, most workers do not have an ideal home setup.

"The sudden nature of the pandemic forced people to make due with what they had — a dining table, the couch, even their bed." - Kelly



Reported they would not describe their workspace as comfortable.



46%

Individual contributors who work primarily or almost always at a desk. People who live in smaller homes are even less likely to work at a desk.



84%

People who still need a suitable workspace at home



Product Opportunity Gap Analysis

Analyzing products for the at-home workplace

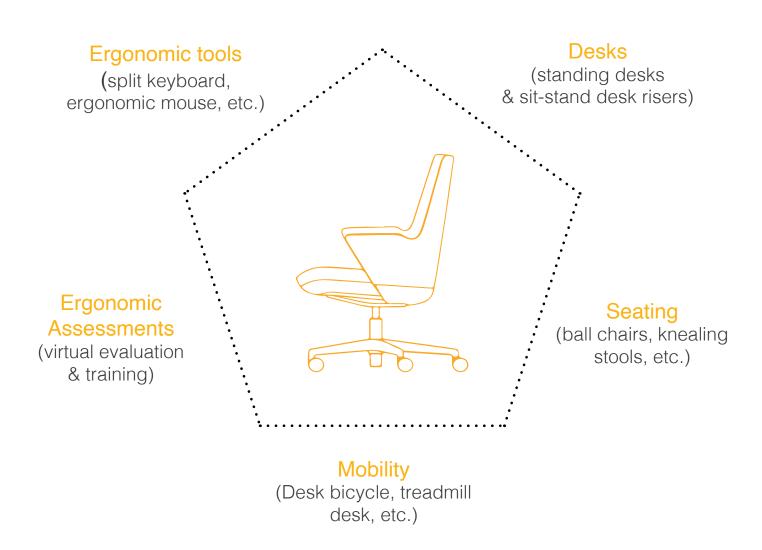
OPPORTUNITY \$550 \$3,500 Main Space Flexible Space \$175 \$300 \$125 \$135 \$200

Add - On Products

Wholesome Products

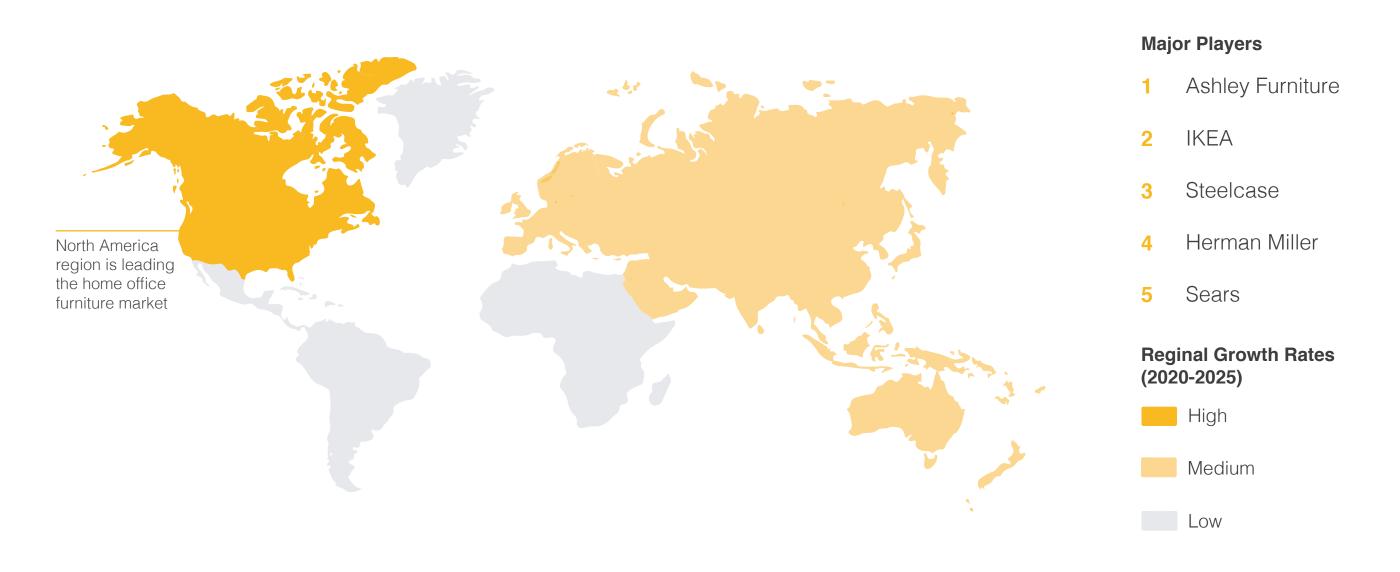
5 Ergo Product Trends

2020-2021 Home Office Trends



Home Office Furniture Market

"The demand for quality items that provide comfort, along with plenty of room to work, is high."

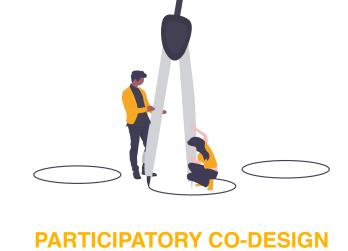




Primary Research - Methods



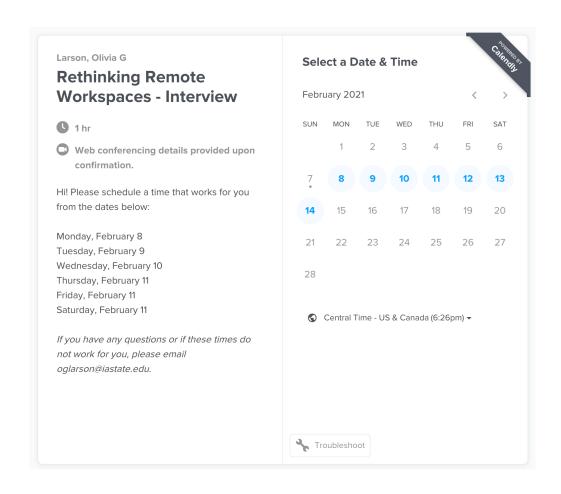




CONTEXT PHOTOS

Recruitment and Interviews

Writing a protocol and navigating a virtual environment



Rethinking the Home Workspace Interview Plan - February 2021 In this protocol, the following conventions are used: Instructional text is presented in normal font. • Text to be read to the participant is presented in bold font. Data items to be marked / collected are presented in italics. • Items the facilitator is to do while reading the protocol are highlighted. **INTRODUCTIONS + OVERVIEW**

Thank the participant for participating and set the context. Once everything is ready for the

Thank you for taking the time to participate in this user interview. I am an industrial design

senior working on a project which aims to introduce flexible working spaces to the at-home

workplace. Research says that 84% of us want to continue telecommuting at least part

Today, I will ask you a series of questions in effort to better understand your remote and in-office work experiences. There are no right or wrong answers, I am just looking to gain

insight into your life and learn how I might add value to the at-home work environment

time even after the pandemic. My goal with this research is to better understand your work environments (both prior to and during the pandemic) and identify design opportunities

interview to begin, read the following introduction:

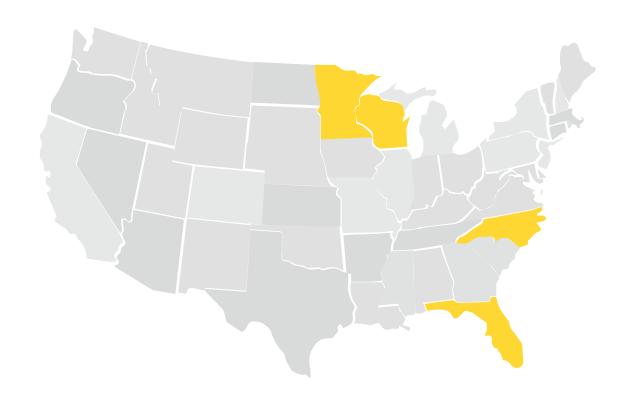
within the at-home workplace.

Tools Used:





7 Interviews



Minnesota, Wisconsin, Florida, North Carolina, & Paris, France

1 Teacher, 2 Designers, 1 Engineer, 1 IT Specialist, 1 Business Person, 1 Medical Field Staff



Amber

Special Education Teacher 9 months remote experience River Falls, WI



Tyra

IT Operations Advisor 4 years remote experience St. Louis Park, MN



Linda

UX Designer 7+ years remote experience Lake Mary, FL



Audrey

UX Designer
11 months remote experience
Minneapolis, MN



Ben

Portfolio Manager 10 months remote experience St. Louis Park, MN



Michael

Training & Education Specialist 4+ years remote experience Charlotte, North Carolina



Sarah

Engineer Manager

1 year remote experience
Paris, France

Contextual Inquiry

Participants were asked to share photos of their various working spaces prior to the interview. Then, we simply talked about them in effort to build empathy and better understand the needs of those I am designing for.



"

I wish I could have another space, a change in scenery... I used to love walking downstairs in the office to the other sitting spaces, especially by the windows... That's what I miss the most is being able to change my scenery. I am on the same chair for 8 hours or more. - Audrey



61

I sit on the couch with my bean bag lap desk to do my more relaxed work [checking on students and lesson planning]..I like the lap desk because I can move anywhere with it. But I don't feel like its big enough, and my mouse is constantly sliding off because it's not level. - Amber



My husband I fight over the couch because it is the most comfortable, but, I wish there was more working space. -Sarah



"

This is my only workspace and I don't move anywhere else.. I wish I could, I just don't have any other spaces where I can be productive. -Tyra



"

I used to go into work and see my name plate on my office door... now I have a make-shift office which used to be my dinning room. It's not a space that was carved out for me, now I have to carve it out myself...I wish someone could help me do that. - Michael

Personas

Based on early reasearch and interviews, I created three personas for each user type.



Audrey (24)

UX Designer

Audrey has been working from home since the start of the pandemic and would like to continue doing so part-time. Audrey misses the variety that came with working in the office, and her apartment lacks work spaces.

"

I just get so restless sitting at my same desk. I need a change in scenery.



Jeff (42)

Training Specialist

Jeff has been working remotely parttime for 4+ years and appreciates feeling valued by his employer. Jeff knows he could have a better homework-life but isn't sure how to do it.

"

It's not a space that was carved out for me... I have to carve it out myself and I wish someone could help me do that.



Shannon (30)

Engineering Manager

Shannon and her husband have been working from home since the start of the pandemic and desires to continue doing so part-time post-pandemic.

Shannon is interested in better accommodating this new normal for both herself and her employees.

"

How can I support both my employees and myself in this new remote environment?

Building Empathy

Injecting a little bit of humanity into the process...

WHAT DO THEY

SEE?

Work equipment

Home mess

Monitors & smart devices

Impact of pandemic on life

Desk, mouse, keyboard, etc.

Water/coffee/tea

Clutter everywhere

Non-aesthetic office equip.

WHAT DO THEY

THINK AND FEEL?

I wish I could have another space, and a change in scenery.

How to make my space more ergonomic?

Maybe I should get a standing desk or knealing chair.

Restless sitting in the same place.

Sometimes it is nice working from home.

WHAT DO THEY

HEAR?

Kids screaming

Dog barking

Work chatter

"Everyone is working from home"

Emails & notifications

"This will be over soon"

WHAT DO THEY

SAY AND DO?

Sit in the same chair for 8+ hours a day

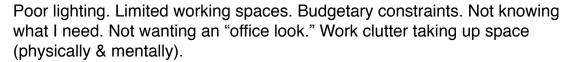
If only I could put my work away and not have to see it...

I want to be able to replicate the coffee shop feel in my home.. just another atmosphere to work.

Difficulty finding things that are practical and aesthetic

I like working from home, but it's not perfect

PAINS



GAINS

 \odot



Ability to put work away. An additional/flexible space. Some help with the at-home work setup. Better integration of home & work. A more comfortable at-home work environment.

SCENARIO

Amber likes the freedom of working from home, but doesn't have a perfect setup to make it comfortable, practical and aesthetic.

GOALS & EXPECTATIONS

To be productive and comfortable while working from home, with the ability to move around and get a change in scenery.

WAKE / PREPARE

Wake up
Get coffee
Check & respond to emails
Plan day
Finish getting ready for day

FOCUS

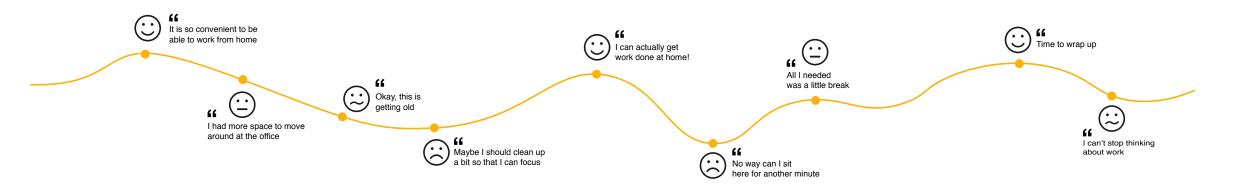
Preliminary or routine meetings
Sit at desk
Check emails
Ping team members
Start on tasks

ENGAGE

Get into the zone Interact with work equipment Do project work Get up from desk to stretch

WRAP UP

Finish last minute to-do's Check emails Tidy up Decompress



Provide additional work/flex space

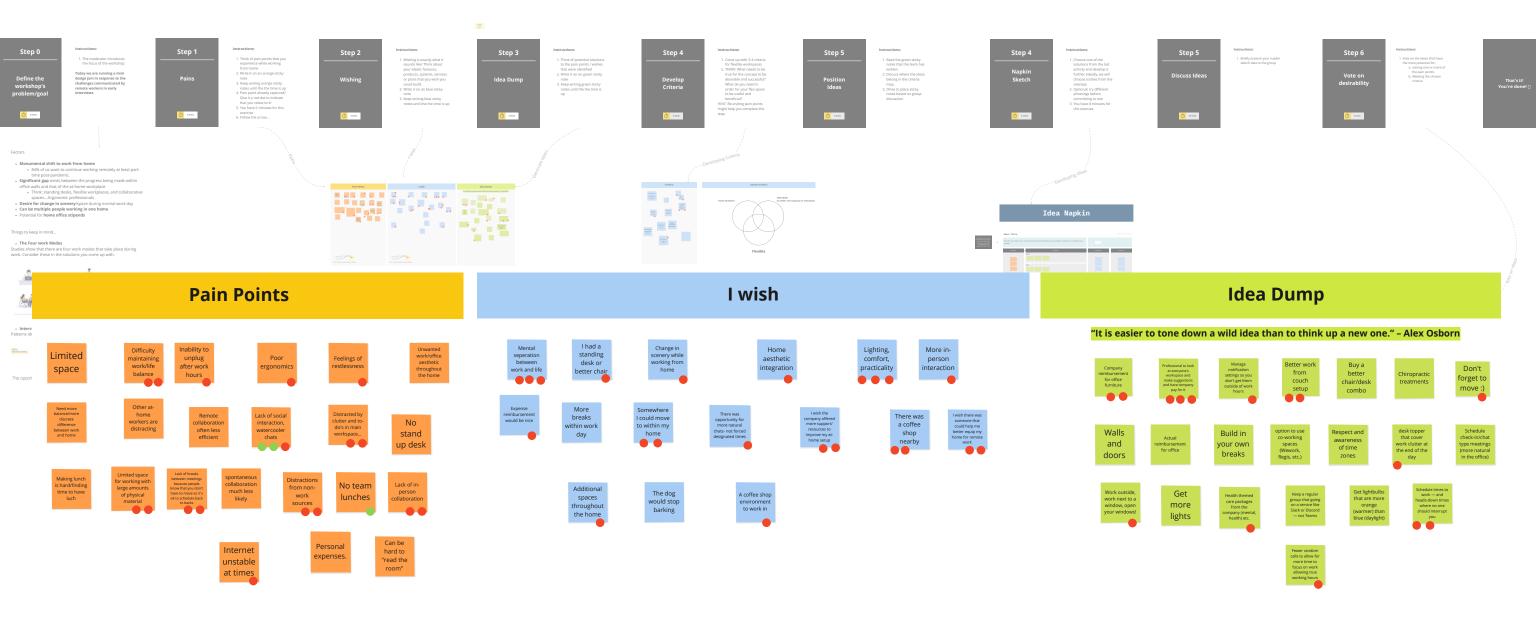
Help with organization or storage of work clutter

Add variety to daily work-life and routines

Support physical work/life seperation within the home

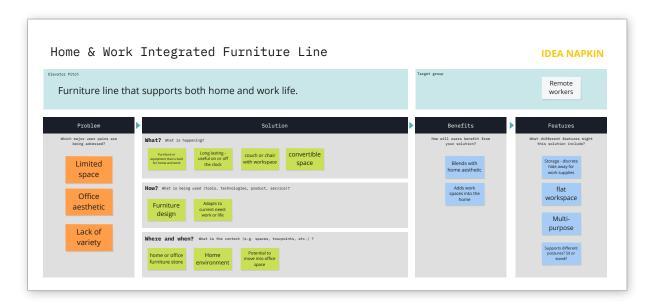
Running a Remote Mini Design Jam

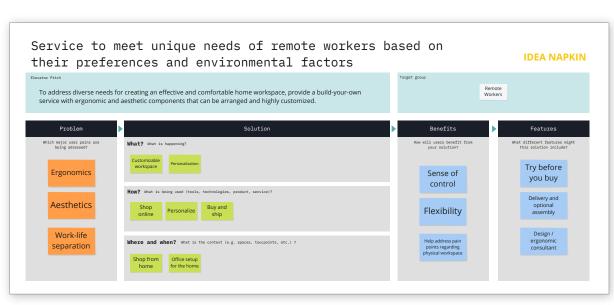
We started by brainstorming the pains and wishes of remote workers to beter understand the problem and define the focus of the workshop. Then, we began an idea dump in effort to generate potential solutions to the pains and wishes that were

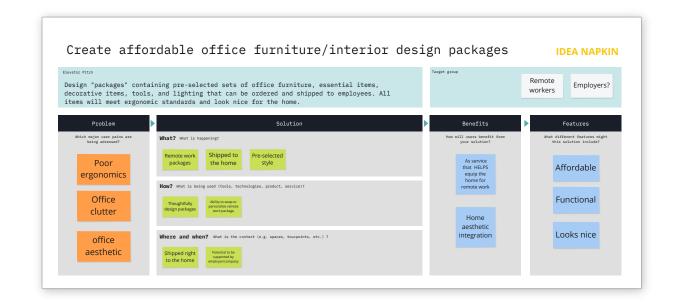


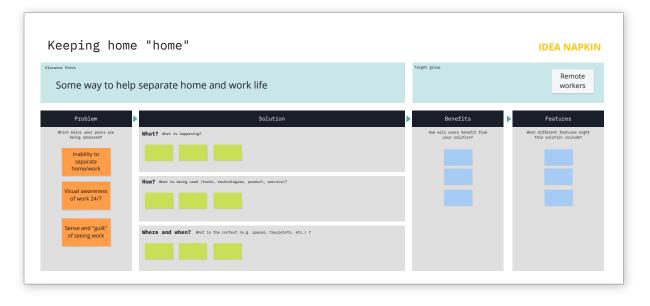
Framing Key Ideas

Participants were asked to create a "napkin sketch" of one key concept











Synthesis Table

Turning findings into insights, which later can be used as design objectives.

	Stressors		Val
Users (Remote workers)	Limited working spacesDifficulty maintaining workInability to "unplug" after wPoor ergonomics		• [• \ • [
Literature	Work Modes • There are 4 main work modes: Focus, learn, socialize, collaborate.	Pandemic • Due to the a long term • Work-from • New freed	e COV shift t n-hom
Technology	Tech Trends • Virtual and physical produ • Lots of stacking, raising/lo		nding
Business	Work Trends • Industry is experiencing ardue to long-term work from h		nand

• Home office stipends

Values & Desires

- Mental separation between work & life
- Variety of scenery
- Lighting, comfort and practicality
- Home aesthetic integration

Benchmarking

the home.

No practicle work furniture that

also blends with the aesthetic of

• Few products that are made

• No service offering guidance

ergonomic work environment.

for work / home integration.

for an at-home healthy,

Other Insights

• Companies are looking for ways to support new workstyle habbits and adapting company culture.

andemic on the Workplace

- Due to the COVID-19 pandemic, research predicts a long term shift to work-from-home.
- Work-from-home gains acceptance.
- New freedom to choose own work equipment

Pandemic on Trends

- Shared home offices
- Focus on health and wealiness for workign from home
- Remote work and travel

Opportunity Gaps

- Work furniture and/or storage with home flow/aesthetic
- Appropriate integration of home / work products
- Assistance with at-home workstation setup
- Modularity, adapt for both on and off work hours
- Supportive, with employer/ employee support aspect

Problem Summary

What is the problem (pain points)?

Difficulty disconnecting self from work. Restlessness, confined to one workspace. Distracted by clutter.

What are the relevent contextual factors?

The pandemic's effect on the future workplace. The home environment, and limited space. The type of work being done.

What are the side affects?

Frustration and/or dissatisfaction with the at-home work setup

What actions are required?

Identifying areas for improvement.

Creating a home environment better equipped for remote work.

Learning about the future of remote work.

Who has the problem?

The remote worker.

What are their goals?

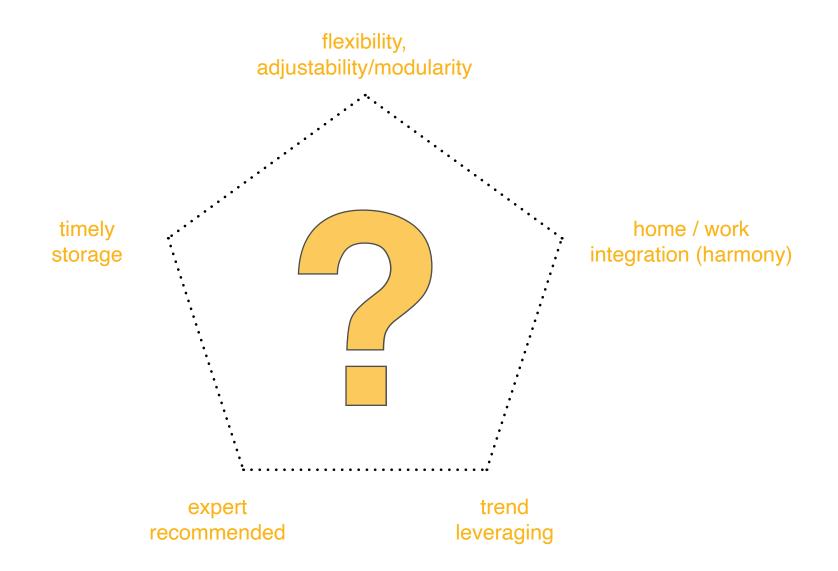
To have more variety and flexibility to work within their home. Ability to store work away.
Guidance or recommendations.
Employer support.

What would they like to avoid?

Another "office look."

Insights to Design Criteria

Form must-haves.



How might we

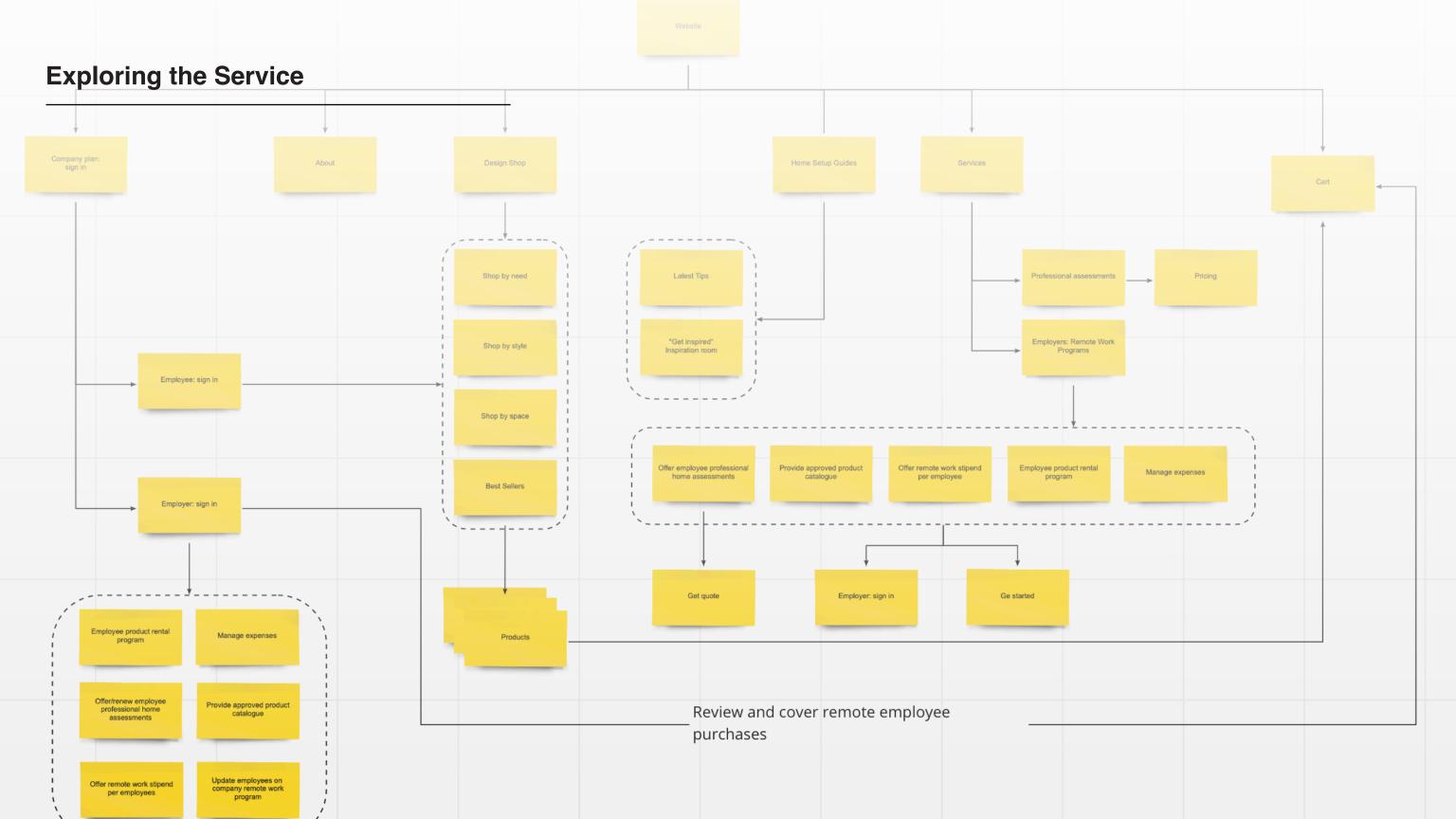
...create a product that provides an **additional workspace**, as well as **storage** to limit the burdens associated with bringing work into the home?

...create a product that supports both work and life activities, and leverages the trends stimulated by the major shift to work from home?

...create a service that provides

expert recommendations for
equipping the home for remote
work, and provides products that
can be seamlessly integrated into
the home aesthetic?





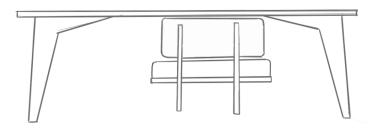
Exploring the Product



- + Provides additional temperary workspace
- ? Potential to be moved thoughout the home
- ? Potential to integrate this with home furniture

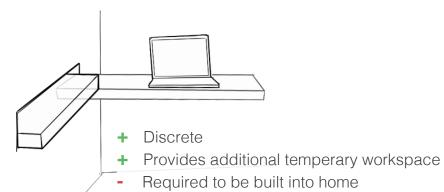


- + Allows items to be stowed away
- No flat workspace
- **?** Potential to integrate this with home furniture

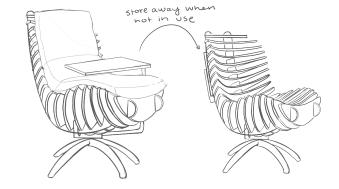




- + Avoids "office look"
- Potential to integrate this into home
- ? Low to floor sitting



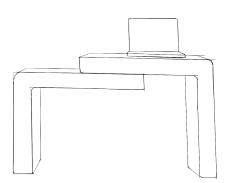




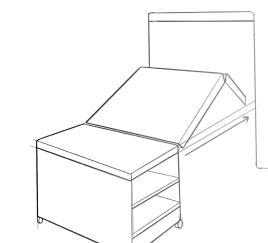
- Flatpack, ease of distribution
- Workspace can be stowed away when not in use
- ? Potential to assemble for L/R handedness



- + End table turns into workspace
- No L/R handedness
- ? Dependent on rotation of chair



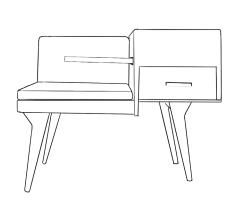
- + Home item that provides additional standing workspace
- Potential to become sacrificial (a place to set things)
- ? Potential to build in discrete storage



- + Provides storage
- + Can be tucked away
- Required to be built into home
- ? More likely to be used as main workspace



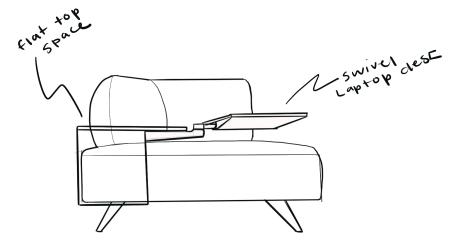
- + Useful on and off the clock
- + Potential to support sitting and standing
- No L/R handedness (for sitting position)
- Puilt in end table and workspace



- Allows work to be hidden
- Will users want another desk option?
- Likely to be consumed/dominated by one individual
- ? Could allow for side hobby workspace

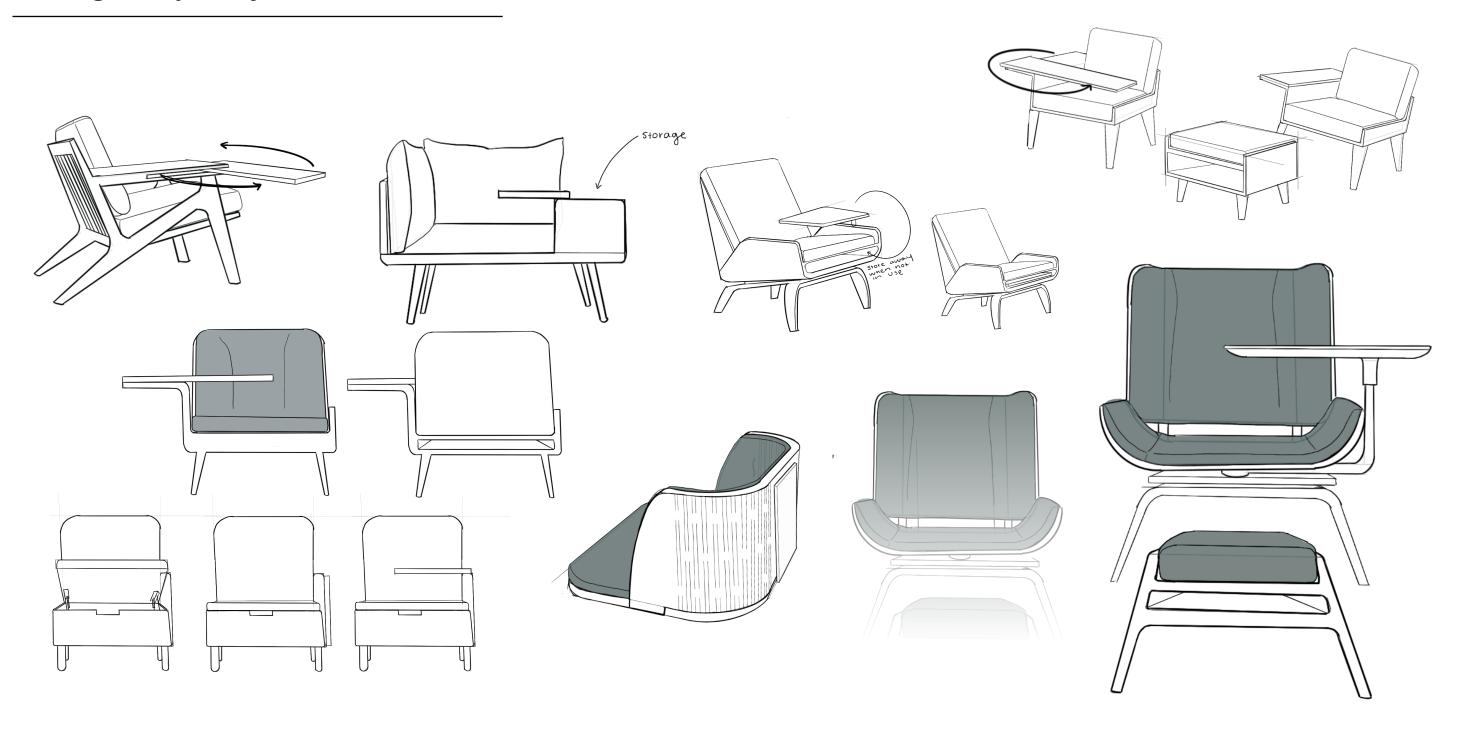


- + Useful on and off the clock
- + Provides storage
- No L/R handedness
- ? Does not infer ownership by any one individual



- + Swivel mechanism allows for better adjustability
- Can be tucked away
- Swivel table becomes obtrusive when not in use
- **?** Built in end table
- ? Does not infer ownership by any one individual in household

Picking a Trajectory...





Understanding a Similar Product: Oculus Chair



The Oculus Chair is a large, enveloping seat made of a down and foam cushion balanced on a thin steel frame for visual lightness (which contrasts with the overall heaviness of the chair). The Oculus chair can be paired with the Wing Ottoman, both of which were designed by Hans J. Wegner in 1960.

Source: Oculus Chair and Ottoman I Dimensions.com

Understanding a Similar Product: Oculus Chair



What are lounge chairs?

Lounge chairs are a variety of chair styles designed to allow a person to stretch out in a reclined or lounging position. Lounge chairs are often adjustable and include chaise longues, recliners, easy chairs, and armless backed chairs paired with ottomans.

What is the seat height of a lounge chair?

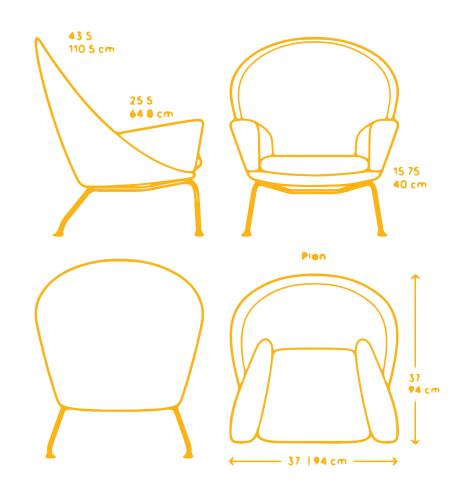
Lounge chairs are typically designed to be lower and more reclined than other chair types and range in seat heights from 12.5"-17" (32-43 cm).

Where are lounge chairs used?

Lounge chairs are best used in spaces where relaxing often occurs such as residential living rooms, reading rooms, and bedrooms or as signature accent pieces in high visibility spaces such as lobbies and reception

Material & Dimensional Analysis





Human Factors Considerations



SEAT HEIGHT (5th %)
SEAT WIDTH (95th %)
BACKREST-TO-SEAT ANGLE (all users)
FOAM PAD DENSITY (95th %)
LUMBAR SUPPORT (all users)

Source: Oculus Chair and Ottoman I Dimensions.com

Product Size Comparison

The Oculus Chair & Ottoman is 12.205 inches smaller thn the Eames Lounge Chair & Ottoman.

Eames Lounge Chair and Ottoman

Height: 31.5" Width: 32.75" Depth: 32.75"

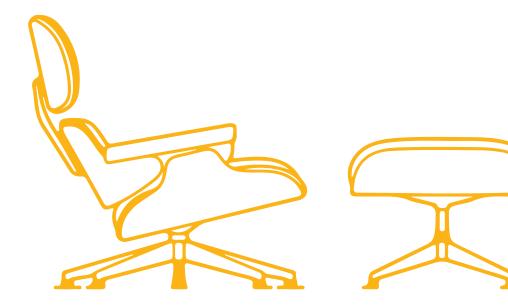
Seat Height: 15.0"

Oculus Chair and Ottoman

Height: 43.5" Width: 37.0" Depth: 37.0"

Seat Height: 15.0"







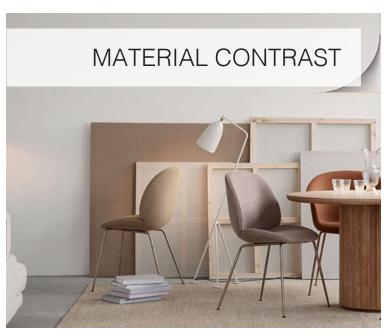
Design Language Table

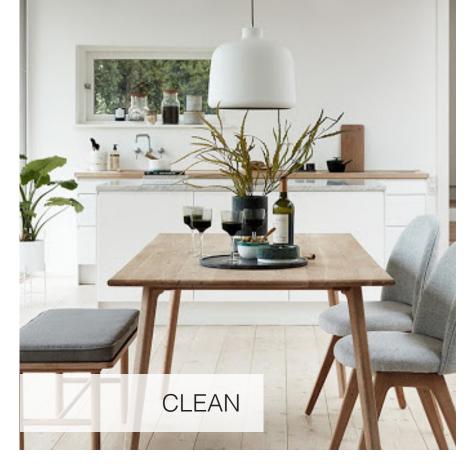
Design Element	Description
Form	Simple - Curvilinear frame, rectangular base, soft upholstry
Details	Comfortable seating, adjustable workspace, ottoman option, ergonomically correct seating angles/heights
Material	Bent lamination, powdercoated metal, foam seat cushion, upholstery fabric (various)
Color	Primary color: black powdercoated metal, veneer plywood (various) Accent color: upholstery fabric (various)
Texture	Repetitive, soft, subtle/discrete
Personality	Modern, clean, elegant, simple, inviting, calming

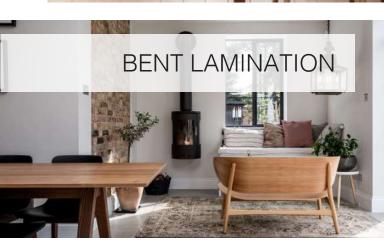
Scandinavian Meets Mid-Century Modern

















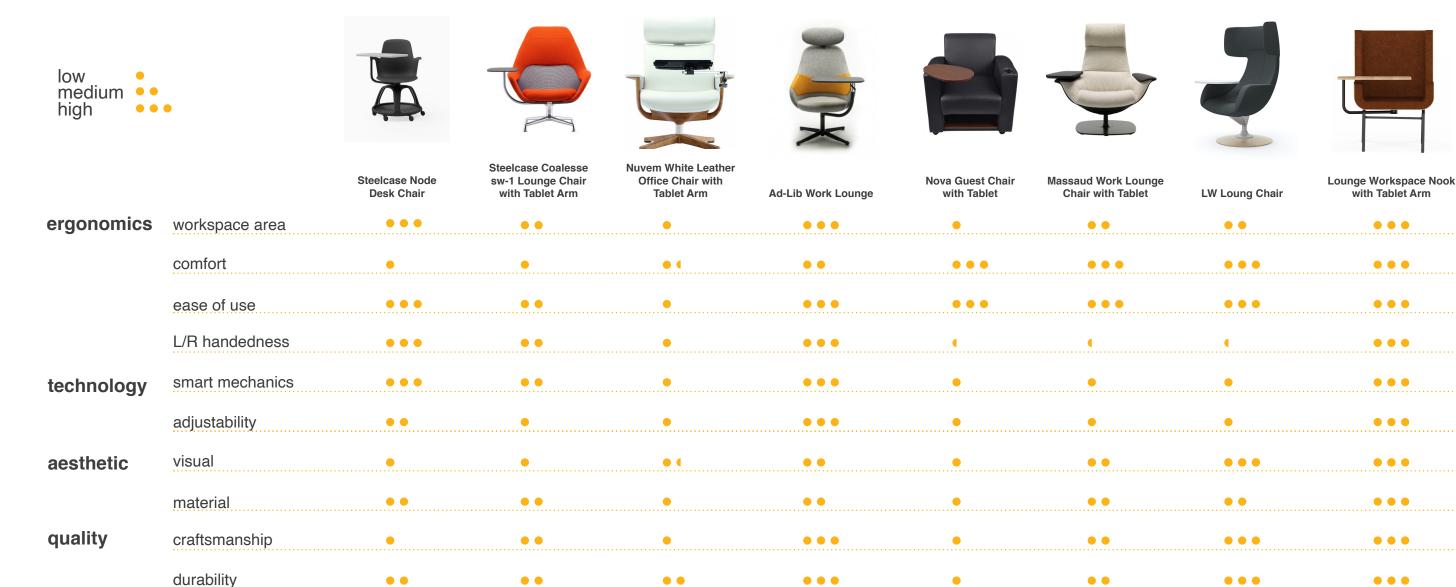
Refining the Form





Product Comparison

materiality



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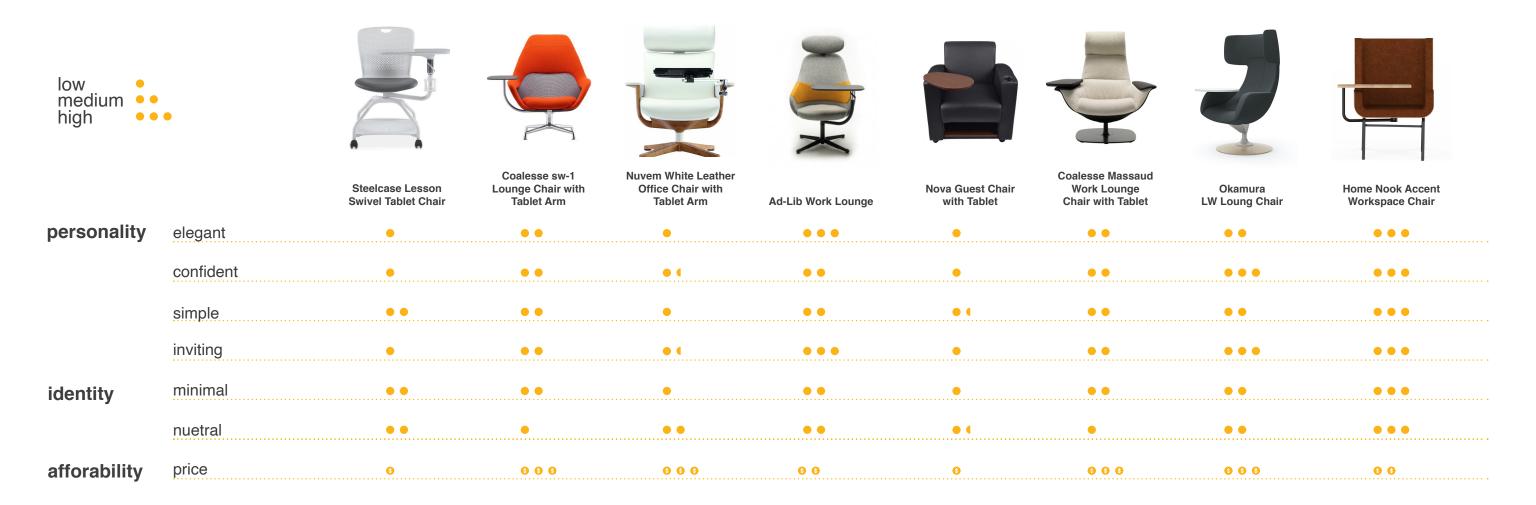
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Product Comparison (cont.)



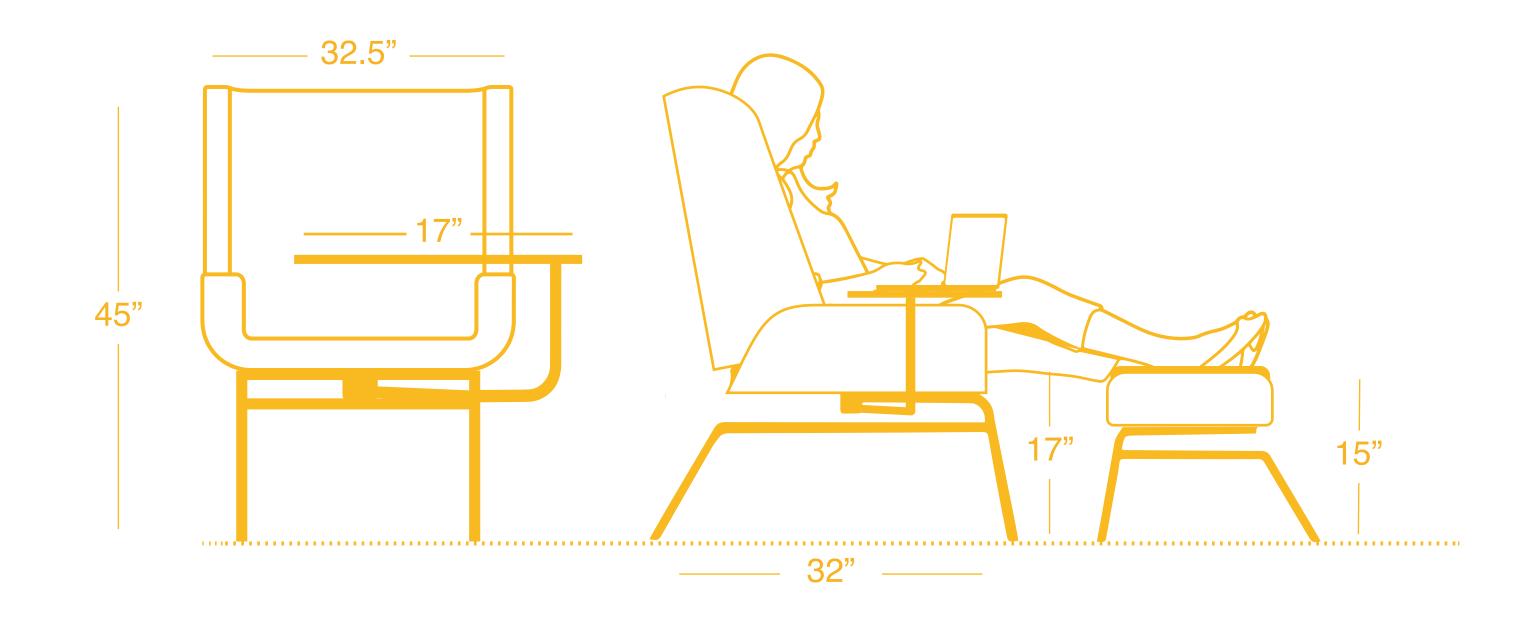
Biaxial Map Analysis



Biaxial Map Analysis (cont.)





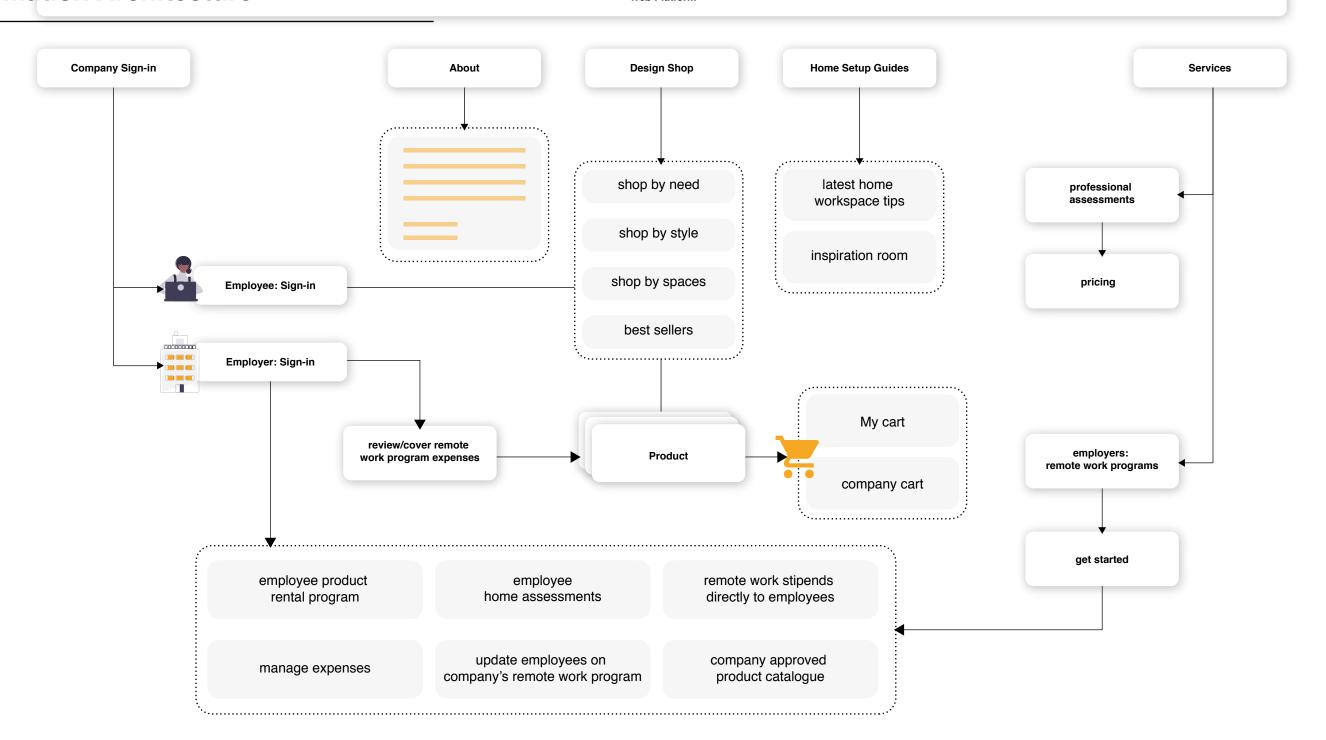










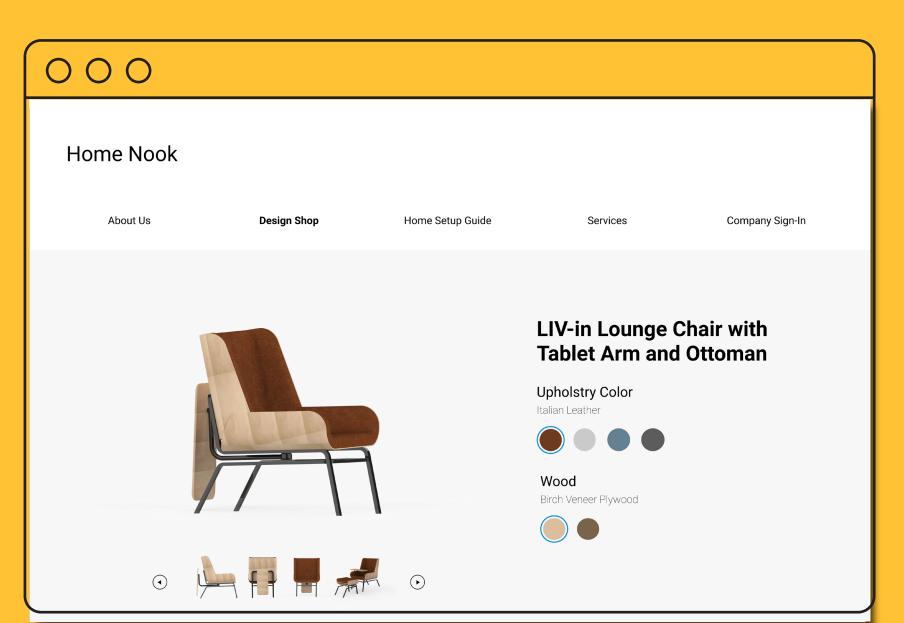


About Us	Design Shop	Home Setup Guide	Services	Company Sign-In			
Welcome!							
Your company values you. Sign in to learn more about your company's work-from-home offerings and all of the ways they are here to support you in your remote work!		Sign-In Work Email Organizatio	n/Company				
		Password	Login				
		Forgot your passwo	10?	Sign Up			
Overview Created with work-from-home in mind, this LIV-in collection was made to introduce more comfortable workspaces into the home without sacrifise to the home aesthetic. It offers a spacious tablet arm, which can be stowed behind when not in use. Specifications Universal handedness tablet arm Stow-away tablet mechanism Optional Ottoman w/ storage cubby							
45"	32.5"		17"	 15″			
Home Nook							
About Us	Design Shop	Home Setup Guide	Services	Company Sign-In			
Home Setu	o Guide						

Home Setup Tips

Work Modes.

Accomodating the Four



Home Nook

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Designed with work and home in mind.

Need help better equipping your home for remote work? No matter where or how you live, we can help you achieve a better at-home work experience.



Home Nook

Design Shop

Home Setup Guide

Company Sign-In

Three ways we make work-from-home better.

Ergonomic + interior design home assessments.

Employee remote work programs.

Work-from-home product catalogue.

Looking beyond mediocrity.

Raising expectations for the future of remote work.

Read the latest research findings

Home Nook

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Design Shop

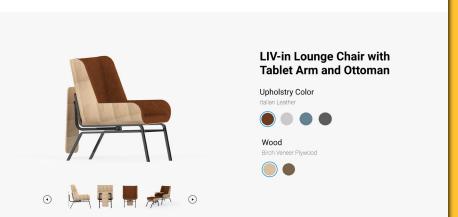


flexible solutions small spaces









Overview

Created with work-from-home in mind, this LIV-in collection was made to introduce more comfortable workspaces into the home without sacrifise to the home aesthetic. It offers a spacious tablet arm, which can be stowed behind when not in use.

Specifications

- · Universal handedness tablet arm
- Stow-away tablet mechanism
- Optional Ottoman w/ storage cubby



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Home Setup Tips

Accomodating the Four Work Modes.









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Services

Employee remote work programs

Are you an employer looking for ways to better support your employees in remote work? We can help you develop and distribute a company support plan.

Home workspace assessments

No matter where or how you live, we can help you achieve a better at-home work experience.

Employee remote work programs

Are you an employer looking for ways to better support your employees in remote work? We can help you develop and distribute a company support plan.

nome workspace assessments

No matter where or how you live, we can help you achieve a better at-home work experience.

Vant to learn more?				
Connect with an expert				
Name				
Email				

Welcome!

Your company values you. Sign in to learn more about your company's work-from-home offerings and all of the ways they are here to support you in your remote work!

Company Name

Sign-In

Work Email Organization/Company

Password



Product-Service System Pitch

Need

Address the gap between the progress being made within office walls and that of the at-home workplace by better equipping the home for remote work.

Promotional Description

Home Nook offers clients a portfolio of remote workplace services including home interior and ergonomic evaluations, which aim to understand individual needs and explore options for improvement by applying the right product (or non-product) solution without sacrifice to the existing home aesthetic. Additionally, Home Nook offers companies various remote work programs for supporting their individual employees during this monumental shift to work from home (which has been recently stimulated by the COVID-19 pandemic).

Features/Functions

Home workspace evaluations | Expert recommendations | Employee remote work programs | Home-integrated workspace solutions |Space planning & inspiration | Latest research findings about work from home tips and trends

Competitors

Steelcase and Herman Miller are leaders in offering workplace services and products, but lack a focus on home integration.

Companies such as Ergobility offer traditional and home office ergonomic evaluations, but primarily provide tech or traditional workplace products, which lack interior design expertise and consideration for various home aesthetics.

Product-Service System Pitch (Cont.)

Target Users

Direct to consumer: Full-time & part-time remote workers | Self-employed

Industry approach: Company leaders & managers

Stakeholders

Design | Manufacturer | Distributor | Marketer | Web developer | Ergonomic/HF Expert

Rationale for Development

To provide home workspace evaluations to understand individual needs and offer solutions that are made to harmonize with existing home aesthetics.

Primary Product/Service Function

Home workplace evaluations with an equally integrated focus on both interior design and ergonomics

Secondary Product/Service Function

To provide a portfolio of workspace solutions made for home integration

Key Technologies

Service: Web platform

Products: Metal and fabric laser cutting, Welding, Powdercoating,

CNC & CNC folding, Etc.

Business Model Canvas

Key Partners

- Search engines
- Investors
- Ecommerce partners & ad agencies
- Marketing & sales partners
- Furniture manufacturers

Key Activities

- Platform optimization
- Marketing to individuals and/or organizations
- R&D build new products, improve existing offerings Partnership with large organizations

Key Resources

- Technology infrastructure / platform (service)
- Business relationship
- Manufacturers (product)

Value Propositions

Users:

Get expert assessments and recommendations, and receive fitting products & equipment that accommodate both work and life.

Employers:

A plan/platform offering for supporting employees evolving needs due to new lifestyle and work environments.

Customer Relationships

- Highly committed experts
- Co-creation with clients to determine solution for unique individual needs
- Remote and in-person assessments

Channels

- Website
- Advertisements
- Referral
- Company hype

Customer Segments

- Large business (that support remote work/ employees)
- Employed individuals working at least part-time remotely: Established professionals, ranging between 30 45 years of age, newly working from home

Cost Structure

- Employee/labor salary
- Platform maintenance
- Material & manufacturing costs
- Warehouse management & delivery cost
- Advertising & business promotional expenses

Revenue Streams

- Fixed price consulting fees
- Small scaled consulting
- Product sales



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Thanks for Visiting!

This project is in memory of a year which transformed every aspect of our world, including the way in which our routines have been disrupted, and our concept of work and life were redefined, for better and for worse.

Olivia Larson - Senior Project | Iowa State University | Spring 2021