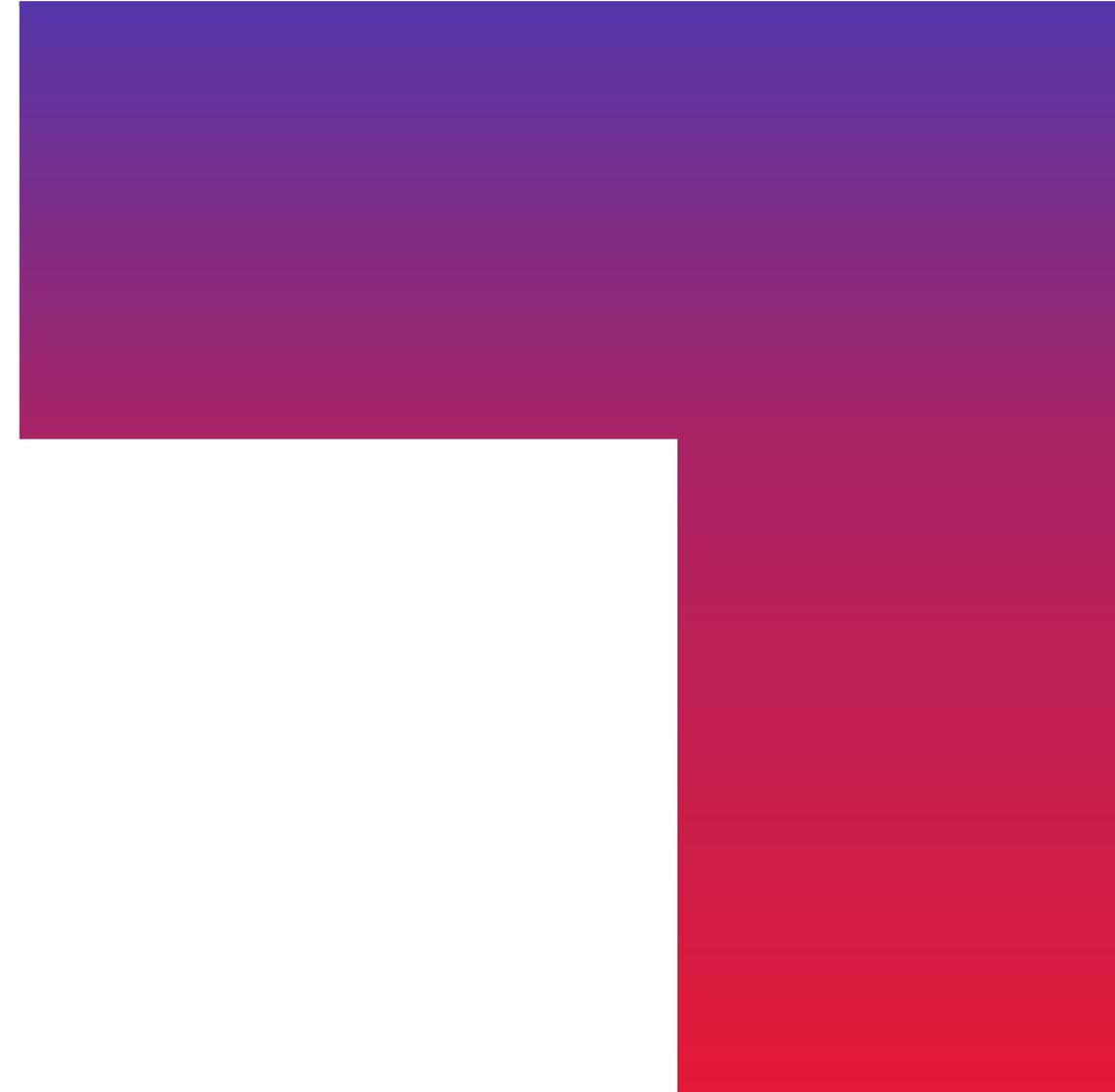


Future of the Developer Workplace

Michael Kaufmann, Vice President

6/16/21



DevOps Forum an ebook

<https://aka.ms/DevOpsForum2021>

DevOps Forum II - Security

7th July 9:00 – 12:30 CET (German, free)

Announcement:

Microsoft eBook: The future of the (remote) developer workplace

The new normal?

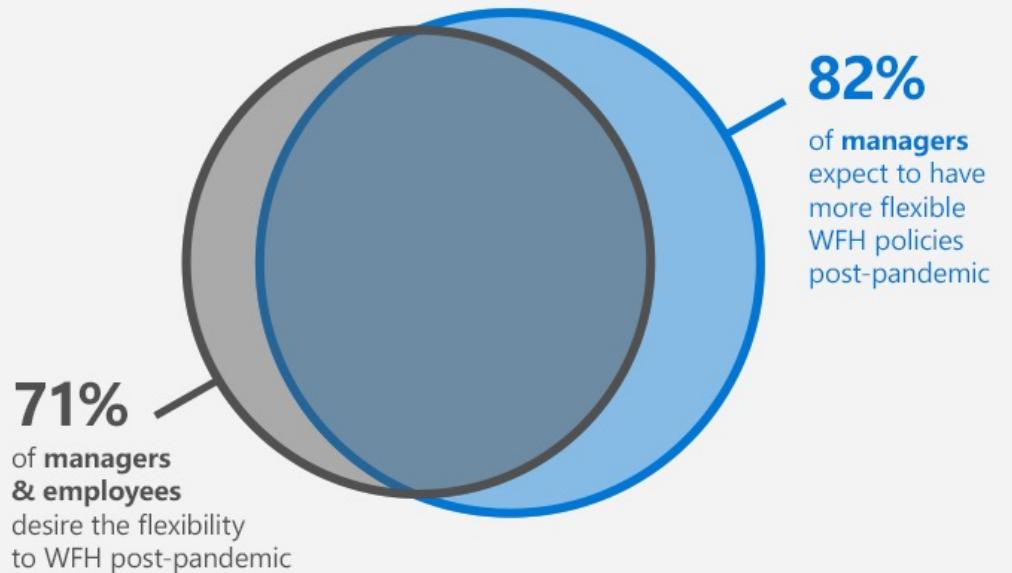
The pandemic will have a lasting impact on how we work...



Managers and employees agree:
working from home must be an option long-term

Source: Harris Poll survey commissioned by Microsoft on May 26-30, 2020, among 2,285 total adults ages 18+ who are currently working remotely across the US, UK, Germany, Italy, Mexico and China.

Work from home opportunities post-pandemic



The new normal?

- Twitter declared its workers could work remotely “forever.”
- Dropbox announced it will essentially eliminate office space for focused work
- Microsoft, employees can now work from home up to 50 percent of the time

Hybrid will be the new normal!

Development Teams

But what about development?

What are the options?

Onsite

Advantage:

- ✓ Communication and Knowledge sharing
- ✓ Ad-hoc meetings
- ✓ Network access
- ✓ Dev. Machines
- ✓ Sep. Work – Life

Challenges:

- Work-life-balance
- Diversity
- Focus time
- Costs
- Environment

Hybrid

Advantage:

- ✓ Remote fatigue
- ✓ Best of both worlds?

Challenges:

- Inclusion of remote participants
- Interactive workshops
- Meeting rooms
- Knowledge sharing (in breaks, Silos)

Remote

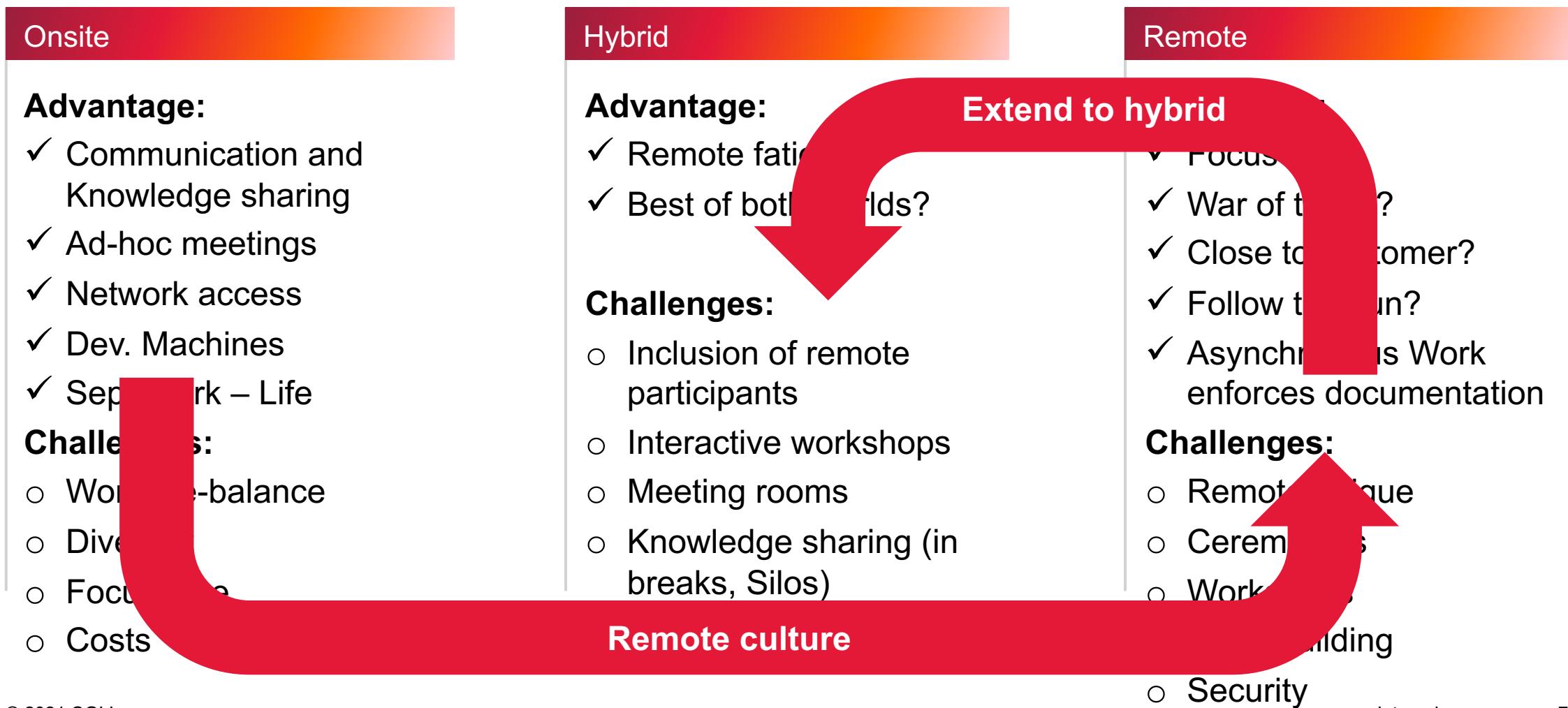
Advantage:

- ✓ Focus time
- ✓ War of talent?
- ✓ Close to customer?
- ✓ Follow the sun?
- ✓ Asynchronous Work enforces documentation

Challenges:

- Remote fatigue
- Ceremonies
- Workshops
- Team building
- Security

Hybrid is only an option in a remote culture...



Remote culture

Meetings

- Keep meetings short and focused
- Record all meetings
- Make meetings optional
- Turn on camera
- Hardware
 - Good cam
 - Light
 - Microphone
- Document work and outcomes
- Code of conduct

Communication

- One to many (chat room) over 1:1 (email)
- Make everything asynchronous
- Document everything (work related)
- Use a common language (English?)
- Leave room for social communication
 - Pair-programming
 - Virtual coffee
- Make it fun (giffs, emoticons)

Collaboration

- Meeting/Ceremony window (Time zones? Breaks?)
- Pull-requests
 - Auto-complete
 - Code owners
- Issues
- Wiki (yaml/pr)
- Everything as code
 - Design documents
 - Config / infrastructure
- Teams/Slack
- Automation
- ChatOps



Ceremonies

- Keep them in a common time window
- Keep the timebox (parking lot for additional conversations)
- Record all meetings (for people that cannot attend)
- Do more documentation (estimation, planning -> split more BPIs in concept phase and doing)
- Use joint (remote) whiteboard (i.e. Microsoft Whiteboard) or a digital workspace (i.e. mural.co) for interactive visual collaboration

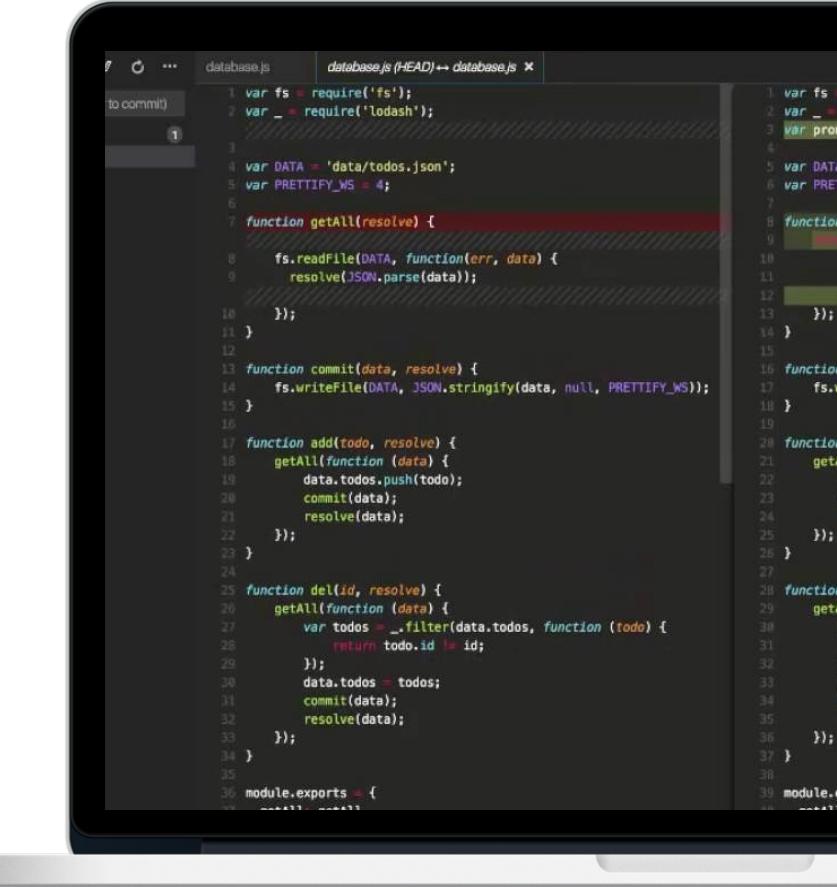
Open-Source

- ✓ 80% - 90% of new applications is already open-source
- ✓ It's better to contribute than to rewrite
- ✓ Open-source communities are
 - ✓ 100% remote
 - ✓ Distributed (normally across the globe)
- ✓ Contributing and engaging during work time can save time and money

Development Environments

Challenges:

- ✓ Secure
- ✓ Unified
- ✓ Maximum developer productivity
- ✓ Fast deployment (minutes, not days)
- ✓ Access to back-end systems
- ✓ Tools & Licenses
- ✓ Policies / Governance
- ✓ Cost effectiveness
- ✓ Remote work
- ✓ Identity Management (3rd Party, Service Provider)
- ✓ Bring-Your-Own-Device (BYOD)



```
database.js  database.js (HEAD) => database.js ×
to commit

1 var fs = require('fs');
2 var _ = require('lodash');
3
4 var DATA = 'data/todos.json';
5 var PRETTIFY_WS = 4;
6
7 function getAll(resolve) {
8
9     fs.readFile(DATA, function(err, data) {
10         resolve(JSON.parse(data));
11     });
12 }
13
14 function commit(data, resolve) {
15     fs.writeFile(DATA, JSON.stringify(data, null, PRETTIFY_WS));
16 }
17
18 function add(todo, resolve) {
19     getAll(function (data) {
20         data.todos.push(todo);
21         commit(data);
22         resolve(data);
23     });
24 }
25
26 function del(id, resolve) {
27     getAll(function (data) {
28         var todos = _.filter(data.todos, function (todo) {
29             return todo.id != id;
30         });
31         data.todos = todos;
32         commit(data);
33         resolve(data);
34     });
35 }
36
37 module.exports = {
```

```
1 var fs = require('fs');
2 var _ = require('lodash');
3 var promise = require('promise');
4
5 var DATA = 'data/todos.json';
6 var PRETTIFY_WS = 4;
7
8 function getAll() {
9     return new Promise((resolve, reject) => {
10         fs.readFile(DATA, function(err, data) {
11             resolve(JSON.parse(data));
12         });
13     });
14 }
15
16 function commit(data, resolve) {
17     fs.writeFile(DATA, JSON.stringify(data, null, PRETTIFY_WS));
18 }
19
20 function add(todo, resolve) {
21     getAll(function (data) {
22         data.todos.push(todo);
23         commit(data);
24         resolve(data);
25     });
26 }
27
28 function del(id, resolve) {
29     getAll(function (data) {
30         var todos = _.filter(data.todos, function (todo) {
31             return todo.id != id;
32         });
33         data.todos = todos;
34         commit(data);
35         resolve(data);
36     });
37 }
38
39 module.exports = {
```

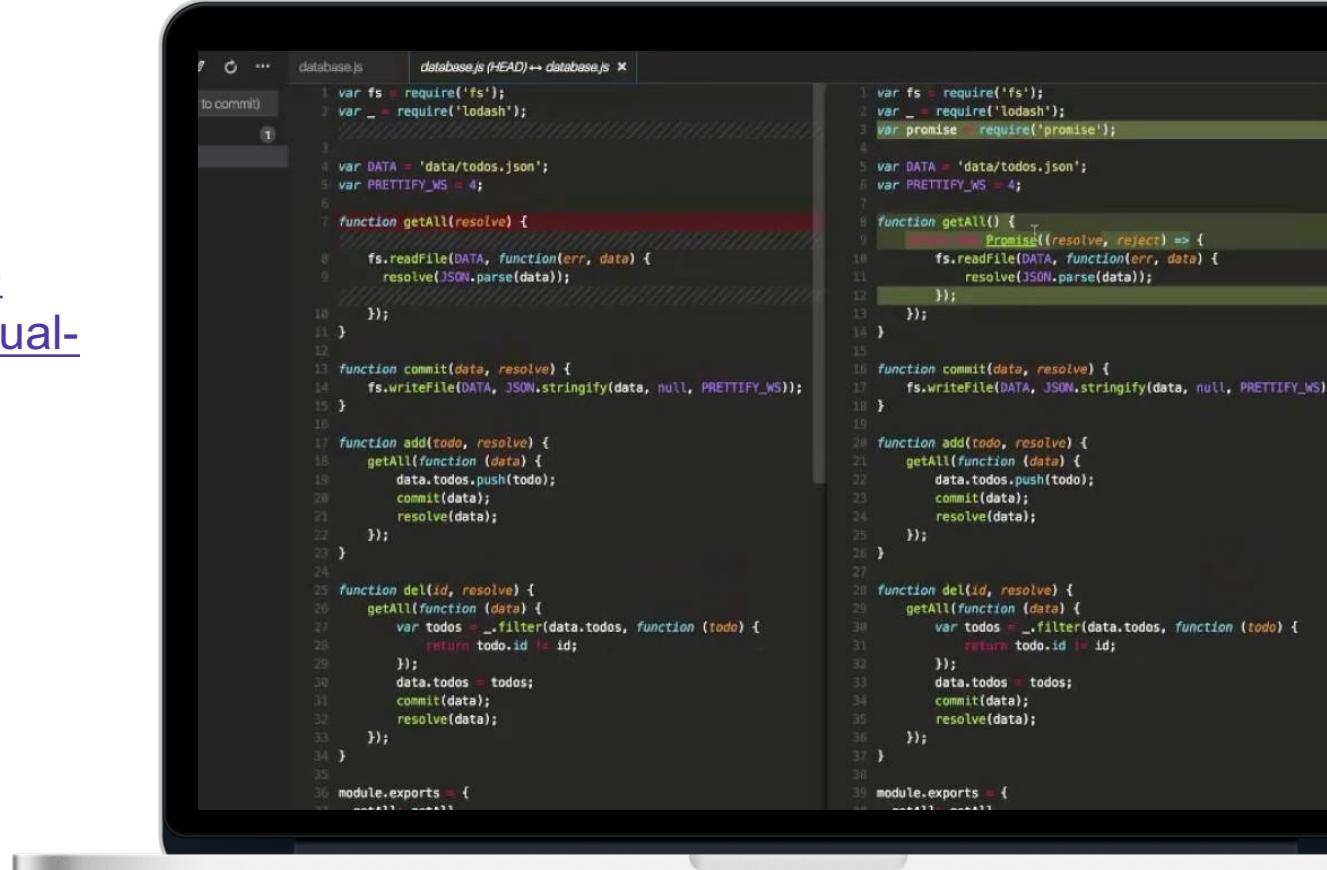
Development Environments

Options:

- ✓ GitHub Codespaces
- ✓ Container-based (docker + vscode)
<https://writeabout.net/2020/03/30/containerized-development-environments-with-docker-and-visual-studio-code/>
- ✓ Azure Virtual Desktop (VDI)

Don'ts:

- ✓ local VMs
- ✓ Install all tools locally
- ✓ Developer is always local admin



```
database.js  database.js (HEAD) => database.js ×

1 var fs = require('fs');
2 var _ = require('lodash');
3
4 var DATA = 'data/todos.json';
5 var PRETTIFY_WS = 4;
6
7 function getAll(resolve) {
8
9     fs.readFile(DATA, function(err, data) {
10         resolve(JSON.parse(data));
11     });
12 }
13
14 function commit(data, resolve) {
15     fs.writeFile(DATA, JSON.stringify(data, null, PRETTIFY_WS));
16 }
17
18 function add(todo, resolve) {
19     getAll(function (data) {
20         data.todos.push(todo);
21         commit(data);
22         resolve(data);
23     });
24 }
25
26 function del(id, resolve) {
27     getAll(function (data) {
28         var todos = _.filter(data.todos, function (todo) {
29             return todo.id != id;
30         });
31         data.todos = todos;
32         commit(data);
33         resolve(data);
34     });
35 }
36
37 module.exports = {
```

```
1 var fs = require('fs');
2 var _ = require('lodash');
3 var promise = require('promise');
4
5 var DATA = 'data/todos.json';
6 var PRETTIFY_WS = 4;
7
8 function getAll() {
9     return new Promise((resolve, reject) => {
10         fs.readFile(DATA, function(err, data) {
11             resolve(JSON.parse(data));
12         });
13     });
14 }
15
16 function commit(data, resolve) {
17     fs.writeFile(DATA, JSON.stringify(data, null, PRETTIFY_WS));
18 }
19
20 function add(todo, resolve) {
21     getAll(function (data) {
22         data.todos.push(todo);
23         commit(data);
24         resolve(data);
25     });
26 }
27
28 function del(id, resolve) {
29     getAll(function (data) {
30         var todos = _.filter(data.todos, function (todo) {
31             return todo.id != id;
32         });
33         data.todos = todos;
34         commit(data);
35         resolve(data);
36     });
37 }
38
39 module.exports = {
```

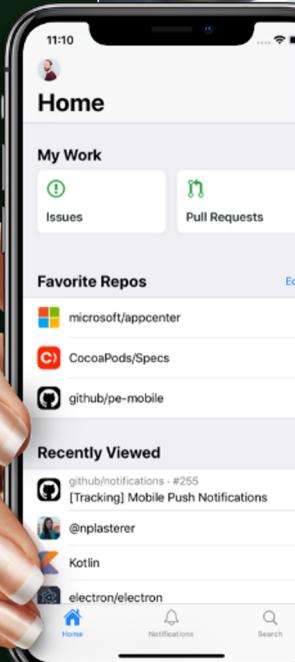
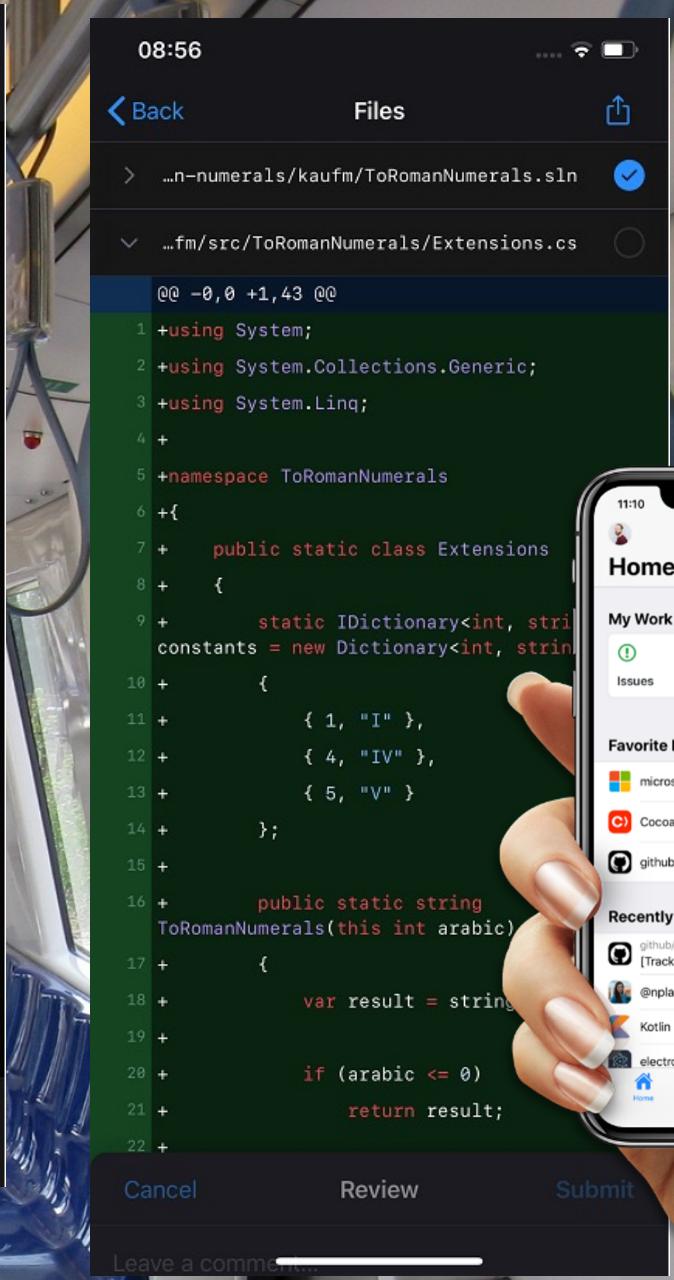
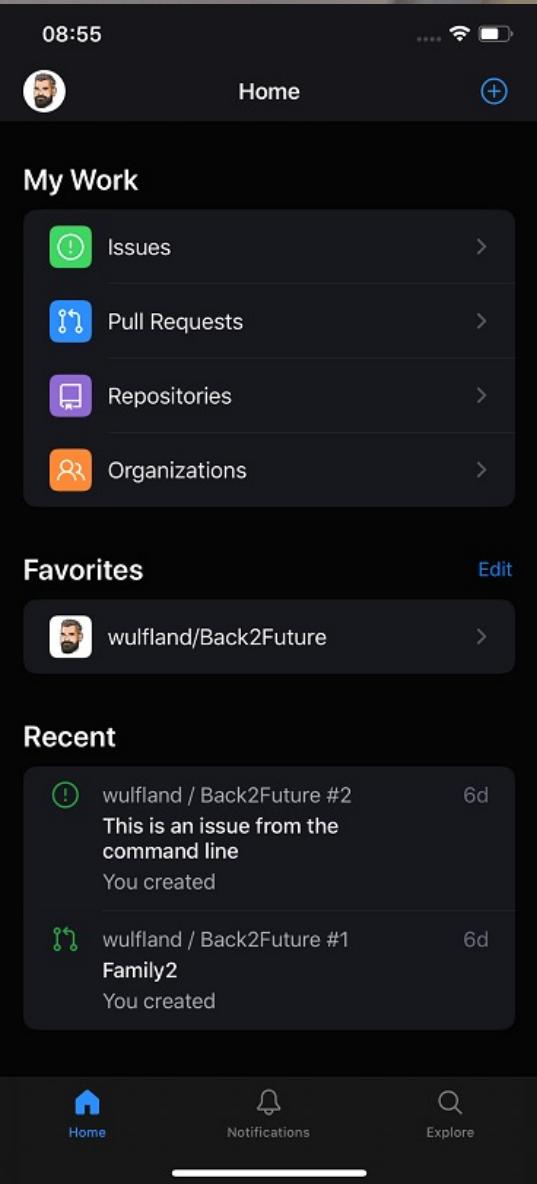
A day in the life of an engineer

In 2025...

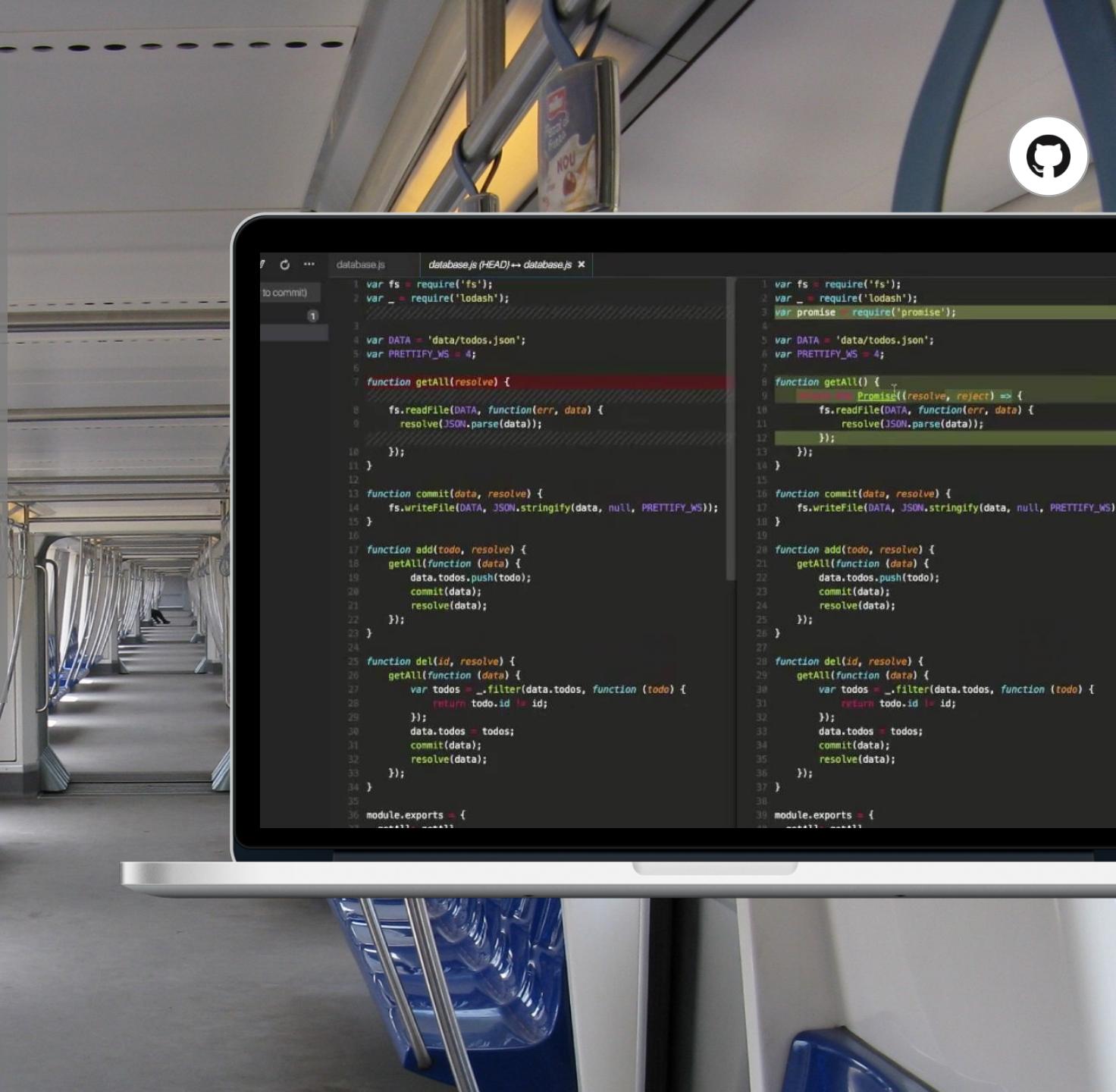
8:30 After breakfast I bring my kids to school...



8:45 In the bus I receive a PR in **GitHub Mobile** from the colleague in Soul that is blocked in another task. I review and approve the PR and close the issue.



9:15 On the way back I want to have a look at the bug of another team that is blocking me. Since they have **GitHub Codespaces**, I can directly reproduce it on my tablet and fix it since it is only a single line.



9:30 Finally back and I have focus time until 11:00. I create a new PR but my colleague from Rome responds to the notification and wants to pair with me. We pair with Teams and Visual Studio (Code) Live Share and nearly finish the new feature!



```
database.js  database.js (HEAD) => database.js  database.js (HEAD)

1 var fs = require('fs');
2 var _ = require('lodash');
3 var promise = require('promise');

4 var DATA = 'data/todos.json';
5 var PRETTIFY_WS = 4;

6 function getAll(resolve) {
7
8   fs.readFile(DATA, function(err, data) {
9     resolve(JSON.parse(data));
10  });
11 }

12 function commit(data, resolve) {
13   fs.writeFile(DATA, JSON.stringify(data, null, PRETTIFY_WS));
14 }

15 function add(todo, resolve) {
16   getAll(function (data) {
17     data.todos.push(todo);
18     commit(data);
19     resolve(data);
20   });
21 }

22 function del(id, resolve) {
23   getAll(function (data) {
24     var todos = _.filter(data.todos, function (todo) {
25       return todo.id != id;
26     });
27     data.todos = todos;
28     commit(data);
29     resolve(data);
30   });
31 }

32 module.exports = {
```



11:30 I meet with two peers in the office to have a design session. The colleague from Rome also joins and we use the whiteboard of the Surface Hub to collaborate. We record the session and publish the results in our wiki.



14:30 After lunch back at home is meeting time. Our colleagues from New York are awake and Asia will drop out soon. In the 15 minutes daily, we move some topics to the “parking lot” reserved after the daily.



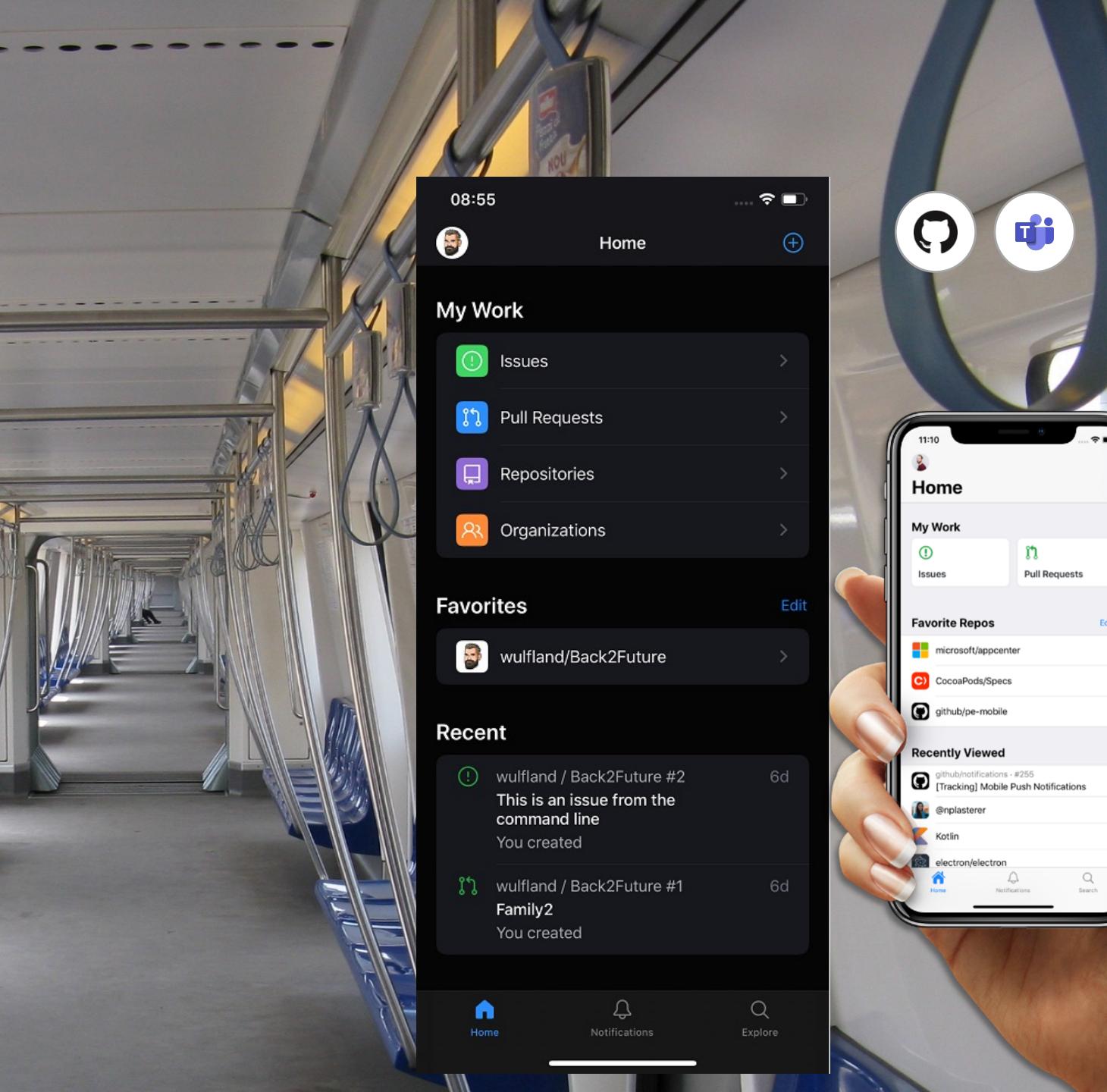
A screenshot of a Microsoft Teams desktop application. On the left, the Teams interface shows a sidebar with Activity, Chat (24 notifications), Teams, Calendar, Calls, and Files. The main area displays a chat window between Andrew Parsons and David Alexander, with a timestamp of 49:33. Below the chat is a list of contacts. On the right, a modal window titled "Azure DevOps | Search work items (try filters a: c: s: t:)" is open, showing a list of completed work items:

- User Story 1671379: Create temp 'create board' dialog to 'Create board' (while we are working on building out new, more sophisticated experience) Completed | Kevin Schechter
- User Story 1671707: Add "work item type" selection to "new Boards" Completed | Stephen Zhang
- Feature 1672283: [Spike] Decouple "Board" from "Azure DevOps Team" Completed | Amit Gupta (Azure DevOps)
- User Story 1671843: The build targets that prevent build from succeeding if you modified the process templates should be removed Completed | Michael Carlson
- User Story 1605382: Hash/cache common OData models to be shared ...

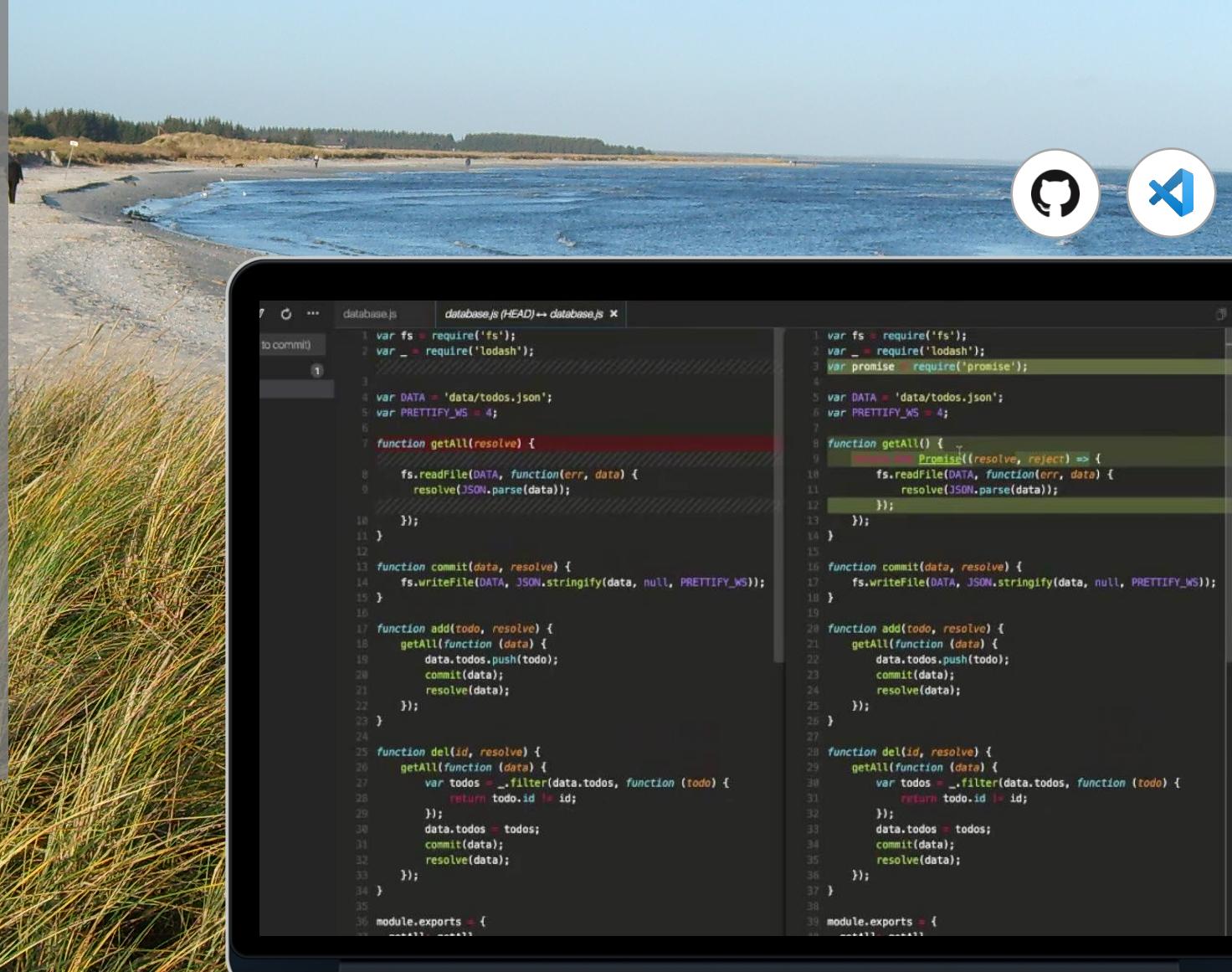
At the bottom of the Teams window, there is a text input field with placeholder text "Type your questions here" and several small icons for different communication and collaboration features.



15:30 On the way to the school I provide our new feature to a group of internal preview testers. I can do this directly from the teams chat using ChatOps.



16:30 Before I enjoy the evening with my kids, I finish my work on the PR from the morning. I set it to auto-complete. If my colleagues in Asia will approve in the morning, it will automatically be released before I start working.



Deep Dive

Workshop in Remote (Distibuted) Development

Verteilte Entwicklungs-Teams

Wie Remote-Work ihre Softwareentwicklung effizienter gestalten kann

In Zeiten von Corona sind viele Unternehmen dazu gezwungen ihre Entwicklungsteams auf Remote-Arbeit umzustellen. Aber verteilte Teams können viele Vorteile haben, wenn man die ersten Hürden gemeistert hat. Viele Unternehmen stellen sogar fest, dass die Effizienz im Team nach einer Eingewöhnungsphase steigt. In diesem Drei-Tage-Bootcamp bringen wir Ihr Entwicklungsteam auf Kurs und vermitteln alles, was zu einer guten Remote-Kultur nötig ist.



Was eine Remote-Kultur ausmacht:

- › Asynchrones arbeiten
- › Meeting-Kultur
 - › Anzahl und Dauer der Meetings
 - › Soziale Kontakte pflegen
 - › Kamera
 - › Aufzeichnungen
- › Gestaltung der Arbeitszeiten
- › Gestaltung von Prozessen



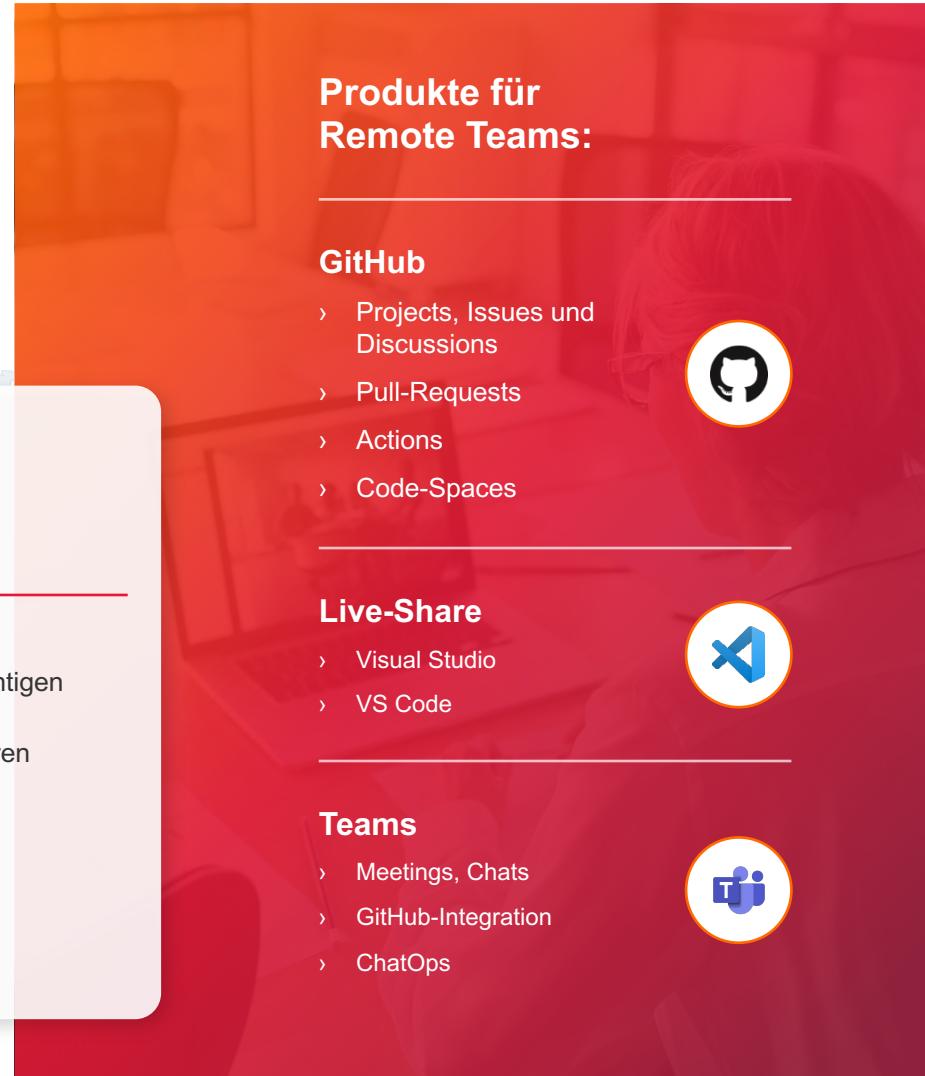
Vorteile von verteilten Teams:

- › Follow-The-Sun-Prinzip
- › Fokuszeiten
- › Diversität
- › Kostenersparnis (Blended Rate)
- › Kundennähe



Staffing:

- › Wie verteilt ist verteilt?
- › T-Shaped-People: die richtigen Skills im Team
- › Umgang mit Sprachbarrieren
- › Onboarding / Hiring



Produkte für Remote Teams:

GitHub

- › Projects, Issues und Discussions
- › Pull-Requests
- › Actions
- › Code-Spaces



Live-Share

- › Visual Studio
- › VS Code



Teams

- › Meetings, Chats
- › GitHub-Integration
- › ChatOps



Verteilte Entwicklungs-Teams

Wie Remote-Work ihre Softwareentwicklung effizienter gestalten kann



Remote Development Teams



**Michael
Kaufmann**



**Thomas
Tomow**



**Das
Drei-Tage-Bootcamp**

Bringen Sie Ihre Teams in nur
drei Tage zum Fliegen:

2.900 EUR
per Trainer

- › Ein, zwei oder mehr erfahrene Trainer – je nach Teamgröße und Wunsch
- › Komplett Remote – „eat your own dogfood“
- › Deckt alle Aspekte von agilen Softwareentwicklungsteams ab:
 - › Hard- und Software-Anforderungen an verteilte Teams
 - › Meetings und Meeting-Kultur
 - › Pull-Requests und Automatisierung
 - › Live Share für Zusammenarbeit in Echtzeit
 - › Microsoft Teams für ChatOps
 - › Durchführung von Remote-Workshops
 - › Whiteboards, Flipcharts und andere Moderations- und Visualisierungstechniken
 - › Zusammenarbeit über verschiedene Zeitzonen
- › Hands-on mit vielen Übungen
- › Unabhängig von Programmiersprache und Plattform (Mac, Linux, Windows)

Verteilte Entwicklungs-Teams

Wie Remote-Work ihre Softwareentwicklung effizienter gestalten kann

In Zeiten von Corona sind viele Unternehmen dazu gezwungen ihre Entwicklungsteams auf Remote-Arbeit umzustellen. Aber verteilte Teams können viele Vorteile haben, wenn man die ersten Hürden gemeistert hat. Viele Unternehmen stellen sogar fest, dass die Effizienz im Team nach einer Eingewöhnungsphase steigt. In diesem Drei-Tage-Bootcamp bringen wir Ihr Entwicklungsteam auf Kurs und vermitteln alles, was zu einer guten Remote-Kultur nötig ist.



Was eine Remote-Kultur ausmacht:

- › Asynchrones arbeiten
- › Meeting-Kultur
 - › Anzahl und Dauer der Meetings
 - › Soziale Kontakte pflegen
 - › Kamera
 - › Aufzeichnungen
- › Gestaltung der Arbeitszeiten
- › Gestaltung von Prozessen



Vorteile von verteilten Teams:

- › Follow-The-Sun-Prinzip
- › Fokuszeiten
- › Diversität
- › Kostenersparnis (Blended Rate)
- › Kundennähe



Staffing:

- › Wie verteilt ist verteilt?
- › T-Shaped-People: die richtigen Skills im Team
- › Umgang mit Sprachbarrieren
- › Onboarding / Hiring



Produkte für Remote Teams:

GitHub

- › Projects, Issues und Discussions
- › Pull-Requests
- › Actions
- › Code-Spaces



Live-Share

- › Visual Studio
- › VS Code



Teams

- › Meetings, Chats
- › GitHub-Integration
- › ChatOps

Remote Development Teams



Michael
Kaufmann



Thomas
Tomow



Das Drei-Tage-Bootcamp

Bringen Sie Ihre Teams in nur drei Tage zum Fliegen:

- › Ein, zwei oder mehr erfahrene Trainer – je nach Teamgröße und Wunsch
- › Komplett Remote – „eat your own dogfood“
- › Deckt alle Aspekte von agilen Softwareentwicklungsteams ab:
 - › Hard- und Software-Anforderungen an verteilte Teams
 - › Meetings und Meeting-Kultur
 - › Pull-Requests und Automatisierung
 - › Live Share für Zusammenarbeit in Echtzeit
 - › Microsoft Teams für ChatOps
 - › Durchführung von Remote-Workshops
 - › Whiteboards, Flipcharts und andere Moderations- und Visualisierungstechniken
 - › Zusammenarbeit über verschiedene Zeitzonen
- › Hands-on mit vielen Übungen
- › Unabhängig von Programmiersprache und Plattform (Mac, Linux, Windows)

2.900 EUR
per Trainer

Thank You