

WHITE PAPER



Digital Employee Experience (DEX)

Proactive Endpoint Analytics as a Key Success Factor in IT Administration

Table of Contents

1	What Is Digital Employee Experience and Why Is It So Important?	1
1.1	A New Perspective on End Users.....	1
1.2	Performance, Stability, and Security	3
2	Between Productivity and Cost Pressure: The New Role of DEX	4
2.1	Flood of Tickets vs. Proactive Incident Management.....	5
2.2	From Visibility to Guidance and Action	6
3	Opportunities for Optimization in IT.....	7
	Slow Computer Startup Times	7
	Program crashes	8
	Laptop Battery Degradation	9
	Slow Connections.....	9
	Security, Performance, and User Experience	11
	User Feedback as a Complement to Telemetry.....	12
4	Real Added Value	13

1 What Is Digital Employee Experience and Why Is It So Important?

Digital Employee Experience (DEX) describes the quality of the digital work experience that employees have with the technologies, applications, devices, networks, and IT processes provided to them. It's not just about whether a device is patched and secure, but whether employees can work reliably with that device without unnecessary interruptions.

A modern DEX approach combines technical aspects—such as boot times, app crashes, resource utilization, battery life, and network quality—with user feedback and organizational context. This provides a more complete picture that reveals where digital friction occurs.

A purely device-centric view therefore falls short. IT systems have become more complex due to hybrid work, cloud applications, increasing security requirements, and greater reliance on tools. At the same time, end users expect digital work to function as smoothly as the digital services they use in their personal lives. When this doesn't happen, it leads to frustration and, above all, a loss of productivity.

DEX tools provide transparency here. They capture and analyze digital experience signals, highlight anomalies, and help IT teams prioritize and resolve issues before they noticeably impact end users' work. Modern DEX solutions are increasingly evolving from pure analysis toward concrete recommendations for action and automated remediation.¹²

1.1 A New Perspective on End Users

While IT focuses on security, software deployment, and Microsoft Windows updates, end users are primarily concerned with computer and battery performance, as well as seamless online meetings. **This means that IT's priorities are not necessarily the issues that most significantly prevent employees from working or, at the very least, hinder their ability to do so.**

Often, IT administrators are unaware of the impact of IT implementations on end users and, are also unaware of how their work affects them. As a result, IT metrics regarding the security and up-to-date status of the IT environment may all appear to be in the green at first glance, but users suffer from poor performance, unstable programs and connections, and a generally

¹ <https://www.gartner.com/en/documents/6514171>

² <https://www.gartner.com/en/documents/6524202>

subpar user experience. This isn't just a matter of employee morale and well-being, but also of the company's overall performance: The time lost due to regular work interruptions—such as system crashes—can amount to entire work weeks over the course of a year.³

In short: A poor user experience reduces productivity. Low productivity leads to frustration, support tickets, and lost productivity. DEX helps IT teams identify these issues earlier and take more targeted action.

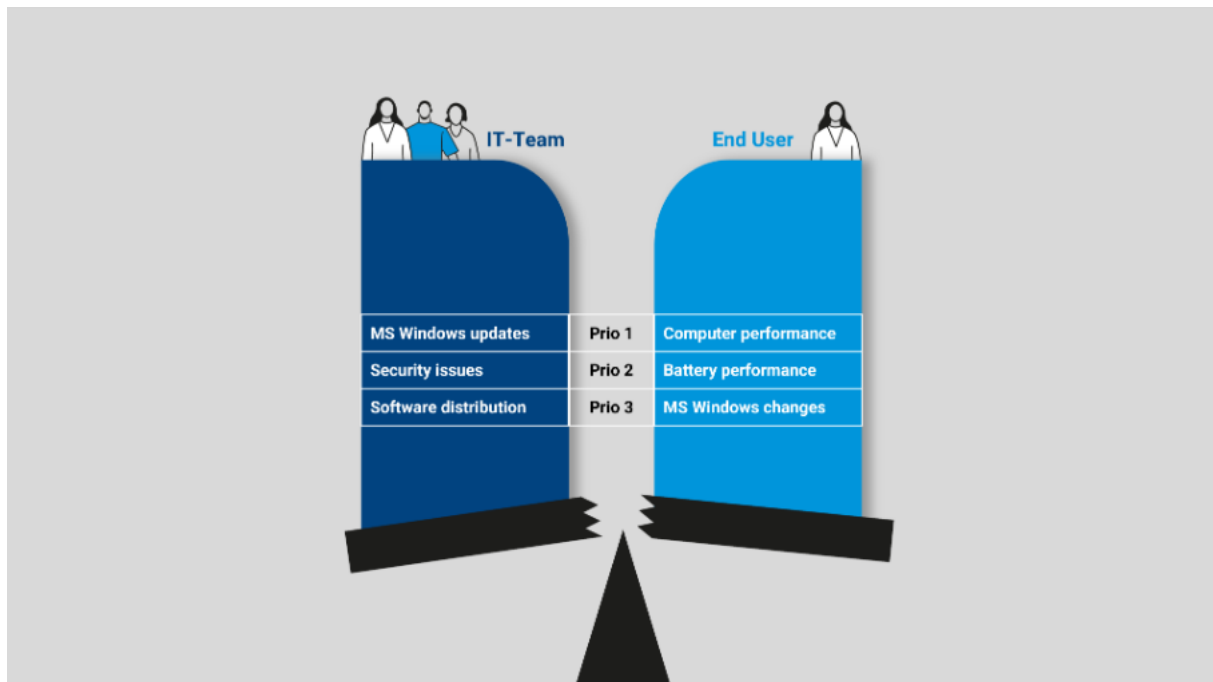


Figure 1: The Different Priorities of IT and End Users

³ IDC Report "How DEX Enhances Operational Efficiency for Medium-Sized Companies": <https://www.baramundi.com/en-us/resources/idc-report-2025/>

1.2 Performance, Stability, and Security

Security and availability remain indispensable. A digital work environment must be high-performing, stable, and secure. Security must not be viewed in isolation: Measures such as patches, policies, access control models, or software updates can improve the end-user experience or, if poorly implemented, create new digital friction.

Performance and stability are therefore not merely matters of convenience. Long boot times, unstable applications, weak batteries, poor network quality, or faulty updates directly impact work time, motivation, and support costs. Modern DEX approaches help not only to identify these technical issues but also to translate them into concrete courses of action.

Furthermore, the overlap between DEX, endpoint management, security, and ITSM is currently growing. Performance data is increasingly becoming part of broader workplace and endpoint management platforms. This creates a new challenge for IT teams: they must not only measure digital friction but also prioritize it, explain it, and, whenever possible, translate it directly into appropriate measures.

2 Between Productivity and Cost Pressure: The New Role of DEX

IT faces a dual challenge today: On the one hand, end users expect a stable, fast, and frictionless digital work environment. On the other hand, IT teams must use existing resources more efficiently. Hardware is no longer automatically replaced simply because devices are getting older. Budgets are under greater pressure to be justified, procurement cycles are scrutinized more closely, and components such as RAM or SSD storage are becoming more expensive and harder to plan for.

This also changes the role of the Digital Employee Experience (DEX). DEX not only highlights poor user experiences but also helps IT make better decisions when balancing productivity, costs, and technical requirements. When devices start up slowly, applications run erratically, or updates fail, replacing the hardware isn't always immediately necessary. Often, targeted measures such as software updates, removing unnecessary autostarts, or replacing the battery are sufficient. In other cases, telemetry data clearly shows that it no longer makes economic sense to continue operating a device.

The current storage shortage, in particular, clearly illustrates this connection: Insufficient free SSD storage can block updates, slow down systems, and trigger support cases. Insufficient RAM can impair multitasking, video conferencing, and productivity-critical applications. For end users, this results in frustration and lost productivity. For IT, it leads to support tickets, analysis efforts, and difficult lifecycle decisions.

DEX bridges both perspectives by linking technical conditions to their actual impact on digital work.

The challenge for IT admins, therefore, is not to wait until problems escalate into tickets before addressing them. They must identify early on which devices, applications, or configurations are particularly hindering productivity—and which measures will yield the greatest benefits. DEX provides a crucial basis for these decisions. Instead of replacing hardware across the board based solely on age, IT teams can use DEX to prioritize based on data.

2.1 Flood of Tickets vs. Proactive Incident Management

Digital Employee Experience Management thus ensures that end devices run more stably and perform better, that network connections function properly, and that end users can work productively and with satisfaction. However, this shift in perspective doesn't just benefit end users and their devices; IT administrators also benefit from working with Digital Employee Experience solutions.

As hardware and software landscapes in companies become increasingly complex, the number of requests to IT teams also rises. As the complexity of tickets (Level 1 to Level 3) increases, so does the Mean Time to Repair (MTTR)—that is, the average time it takes to resolve an IT problem. IT administrators “work their way” from ticket to ticket; this costs them a lot of time and the company a lot of money. This reactive problem management needs to be changed—specifically, toward proactive problem-solving.

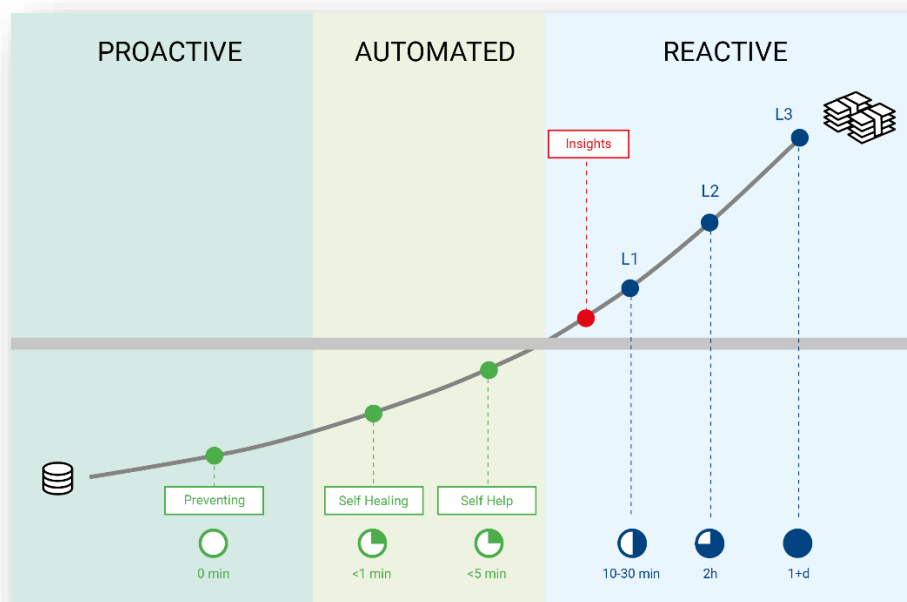


Figure 1 - Save Time and Money Through Proactive Incident Management

With a DEX solution, IT administrators can transform the current flood of tickets into proactive incident management. By monitoring specific endpoint indicators and automatically linking anomalies to their respective root causes, corrective actions can be automated.

2.2 From Visibility to Guidance and Action

The next stage in DEX's evolution does not lie in providing IT teams with even more dashboards, , and metrics, because greater transparency can also create new burdens. If every signal appears equally important, it results in additional analysis effort rather than relief. IT teams therefore need guidance: Which anomalies are truly critical? Which ones affect many users, and which can be resolved quickly with reasonable effort?

This is precisely where DEX is evolving. Modern DEX approaches help evaluate and prioritize technical signals. A slow device does not automatically need to be replaced. A single crash is not necessarily a company-wide problem. High memory usage becomes particularly relevant when it blocks updates, slows down applications, or triggers support cases.

As a result, the value of DEX is shifting from mere monitoring to decision support. IT teams should be able to identify more quickly where a problem originates—whether in hardware, software, configuration, the network, or update processes—and determine the appropriate course of action: updating an application, expanding storage, replacing the battery, or replacing the device.

This is how DEX moves from **insight** to **guidance** and ultimately to **action**: Digital friction becomes visible, is prioritized in a way that makes sense, and is translated into concrete courses of action. Visibility remains the starting point, and the true added value emerges when this leads to guidance and targeted improvements to the digital work environment.

3 Opportunities for Optimization in IT

IT problems that arise suddenly and without warning are always possible, but the vast majority give more or less subtle warning signs. With the right tools, these signals can be identified, correctly interpreted, and appropriate countermeasures implemented.

Slow Computer Startup Times

One of the most common user complaints is slow boot times. Reducing this startup time therefore offers enormous potential for getting the workforce up and running more quickly. Anyone addressing this issue should include the following aspects in their analysis in addition to boot time:

- Are individual devices particularly problematic?
- Are there specific times of day when the boot process takes an unusually long time?
- What software and hardware components are found on the devices that stand out?
- Do certain elements take an unusually long time to start up—for example, when checking for updates—thereby blocking the launch of other applications?

These elements can be captured and analyzed using a DEX tool. This enables you to resolve these bottlenecks company-wide, for example, through software updates or hardware replacements.



Figure 2 - Identification of "slow" endpoints in baramundi proactive hub

Program crashes

Interaction between different program versions is often the cause of more widespread problems. PowerPoint is a case in point. In the past, developers have repeatedly made minor changes to the feature set across different versions. As a result, presentations created for one version no longer work—or do not work properly—on devices running a different software version. Users are left wondering why the same presentation works on one computer but not on another.

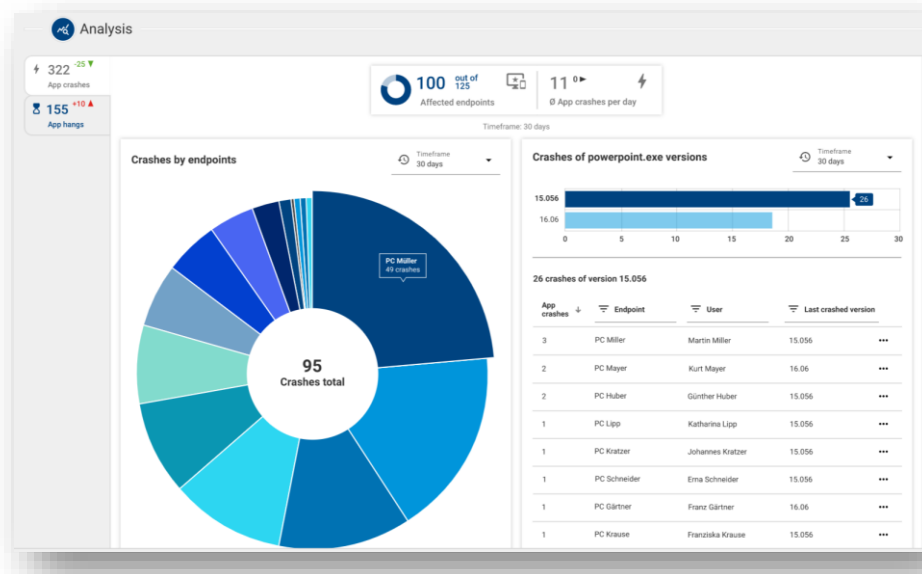


Figure 3 - Detailed view of application crashes

IT can eliminate these sources of frustration with DEX solutions by identifying which applications, in which versions, are causing an increased number of program crashes or terminations. Additionally, IT can gather feedback on where problems occur and which software (version) was involved. These applications should then be updated as soon as possible.

Laptop Battery Degradation

Frequent mobile work puts a great deal of strain on the batteries built into laptops. As a result, their capacity decreases over time until, suddenly, only a few minutes of power remain. Often, users cannot even tell exactly how much the battery has degraded—until the computer shuts down at a critical moment.

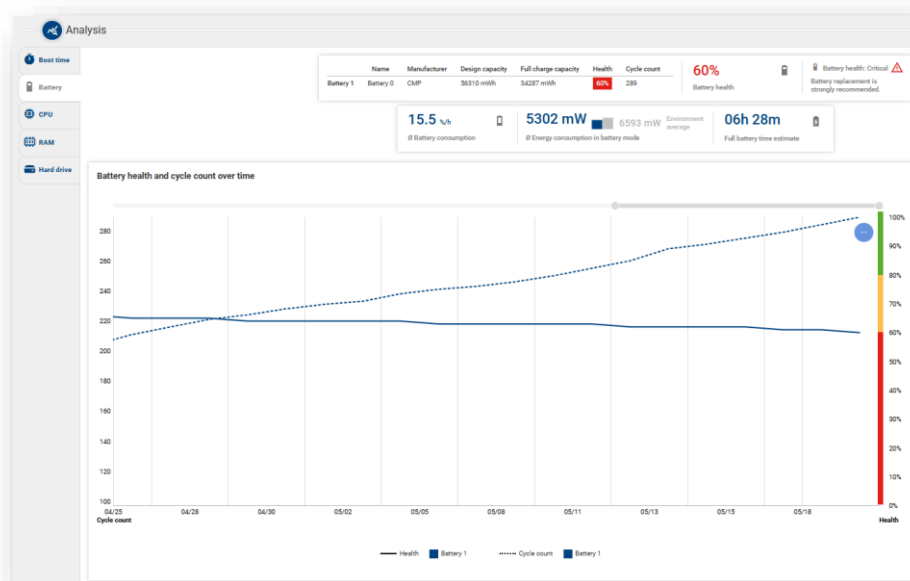


Figure 4 - Focus on Critical Battery Capacities of End Devices

This scenario can be proactively avoided with the help of Digital Employee Experience tools: The software can track and automatically analyze the relevant performance metrics over time. This allows IT to provide all employees with a new battery before the problem becomes acute.

Slow Connections

Slow network connections are a nightmare in everyday work. While delays in email and webpage loading are still somewhat tolerable for users, video calls with poor audio and video quality, in particular, cause enormous frustration in everyday business life. This negatively impacts both employee productivity and the company's reputation during online customer meetings. The causes often lie in outdated or defective network hardware, incorrect configurations of LAN, Wi-Fi, or VPN connections, or outdated or incompatible versions of collaboration software.

With DEX, IT administrators can flag the need for action early on as soon as latency exceeds predefined parameters. The metrics also provide a clear picture of where within the network the issue lies.

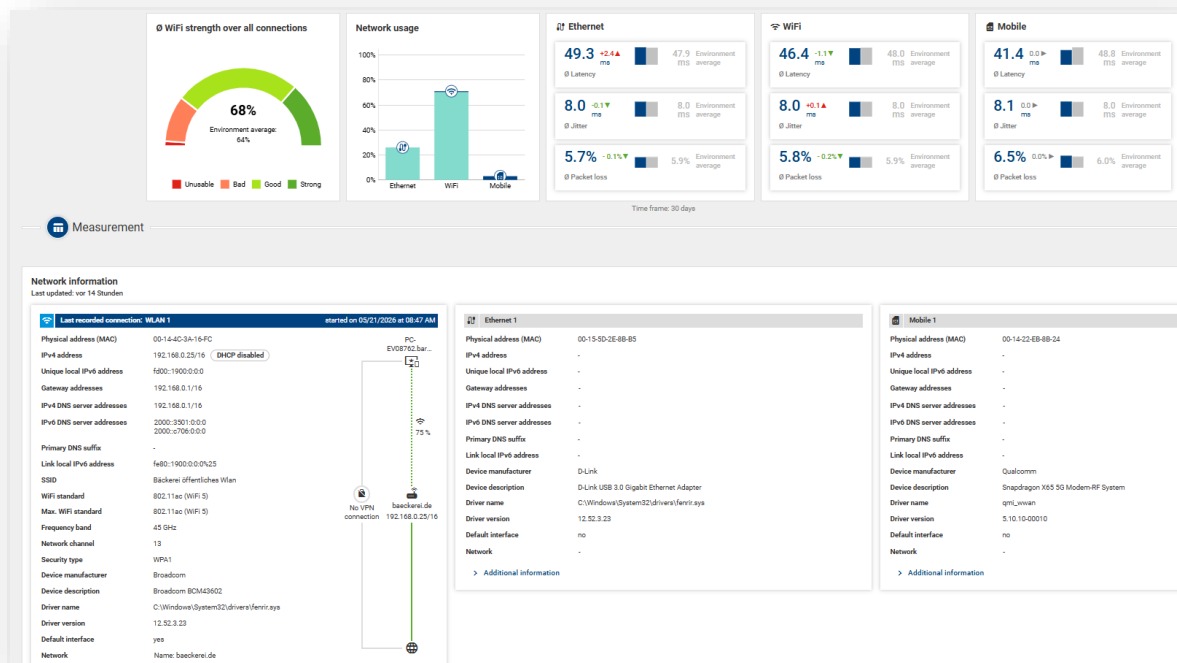


Figure 5 – Continuous Monitoring of Network Quality and Latency

Security, Performance, and User Experience

Security and user experience must not be considered in isolation. For example, vulnerability management and OS updates are essential for securing digital workplaces. At the same time, these very measures can cause new disruptions if they are poorly planned or rolled out without taking the actual work environment into account. A patch can cause performance issues, a security policy can block legitimate workflows, or an update can repeatedly fail due to limited system resources.

Conversely, a poor digital employee experience can also exacerbate security risks. When devices are slow, updates fail, blue screens occur repeatedly, or employees are held back by technical limitations, the likelihood of workarounds increases: updates are postponed, alternative tools are used, or warning messages are ignored. Blue screens are not automatically a security incident, but they can certainly be security-relevant. They often occur in kernel-related areas such as drivers—precisely where stability, permissions, integrity, and protection mechanisms are closely intertwined. In certain cases, a blue screen can also be triggered when Windows protects critical kernel structures from unauthorized changes, or when a faulty or compromised driver jeopardizes stable operation. If such causes remain unaddressed, endpoints may remain unstable, unpatched, or inadequately secured for longer periods.

This is where the baramundi Proactive Hub approach comes into play: performance and experience signals are not viewed in isolation but evaluated within their context. This creates a holistic picture of the digital employee experience (DEX)—and thus the foundation for informed decisions.

However, even DEX analyses do not yet answer all relevant questions in day-to-day IT operations. That is precisely why we are taking it one step further with the baramundi Proactive Hub: It builds on the insights from the Digital Employee Experience and specifically expands upon them to include security aspects.

This enables data-driven answers to questions such as, *“Which devices have critical vulnerabilities and poor performance at the same time? Where are endpoints remaining in a risky state because updates have failed or there is insufficient storage space?”*

DEX thus serves as a bridge between security and productivity. IT teams can not only identify where vulnerabilities or performance issues exist but also determine which measures should be prioritized to improve both security and productivity simultaneously. Visibility thus becomes the foundation for better decision-making and targeted action.

User Feedback as a Complement to Telemetry

Not every instance of digital friction can be clearly measured technically. That's why active feedback from employees remains a key component of DEX. It's crucial not to view feedback in isolation, but to combine it with telemetry and context. This transforms subjective feedback into an actionable signal for prioritization and root cause analysis.

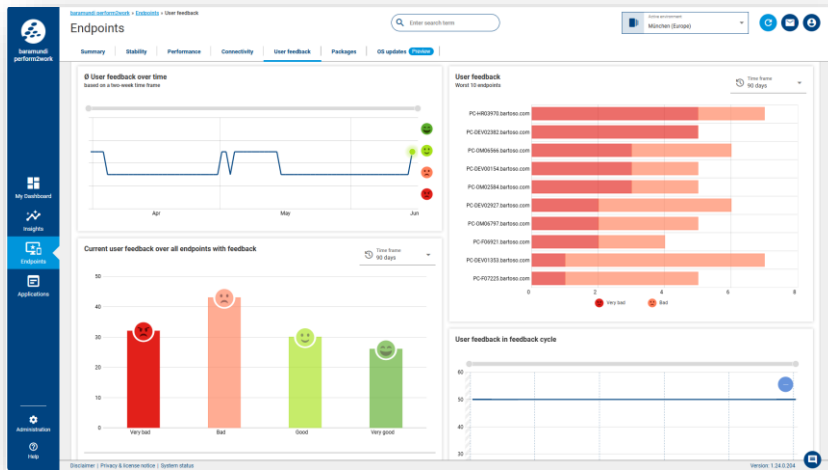


Figure 6 End User feedback connects technology with the employee experience

4 Real Added Value

A well-thought-out DEX strategy creates added value for end users, IT teams, and companies. End users experience fewer interruptions. IT teams identify patterns earlier, prioritize more effectively, and reduce unnecessary tickets. Companies gain productivity, more reliable digital processes, and a better foundation for investment decisions.

The key added value arises when DEX goes beyond mere visibility. Dashboards alone can only show that something is wrong. Modern DEX also requires guidance: What is important? Which improvement measures are appropriate?

In this sense, DEX serves as a starting point for proactive endpoint operations. baramundi Proactive Hub forms the DEX component within the development of the baramundi Proactive Hub: Endpoint telemetry and end-user feedback make digital friction visible; building on this, recommendations for action, security insights, and additional proactive endpoint management capabilities can be developed in the future.

Would you like to check out our digital employee experience tool, baramundi Proactive Hub?

For more information and to sign up for a free three-month trial of the full version, visit www.baramundi.com/dex-us.

Get in Touch!

We are looking forward to meeting you!



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