Optimization of Mobile Development Strategies for Maximum Business Impact

JUN 2025

CHIEF SOFTWARE ENGINEER II

Sasha is a software developer with over 20 years in multiple technologies and domains. A tech lead, architect, and mobile solutions expert, he specializes in AI integrations for mobile apps, focusing on on-device AI. He excels in Flutter, Firebase, and generative AI for robust, scalable apps. Sasha is Chief Software Engineer and Head of Flutter Discipline at EPAM, GDE for AI, Firebase, Flutter, Dart, and co-organizes Flutter Berlin Community

SASHA DENISOV

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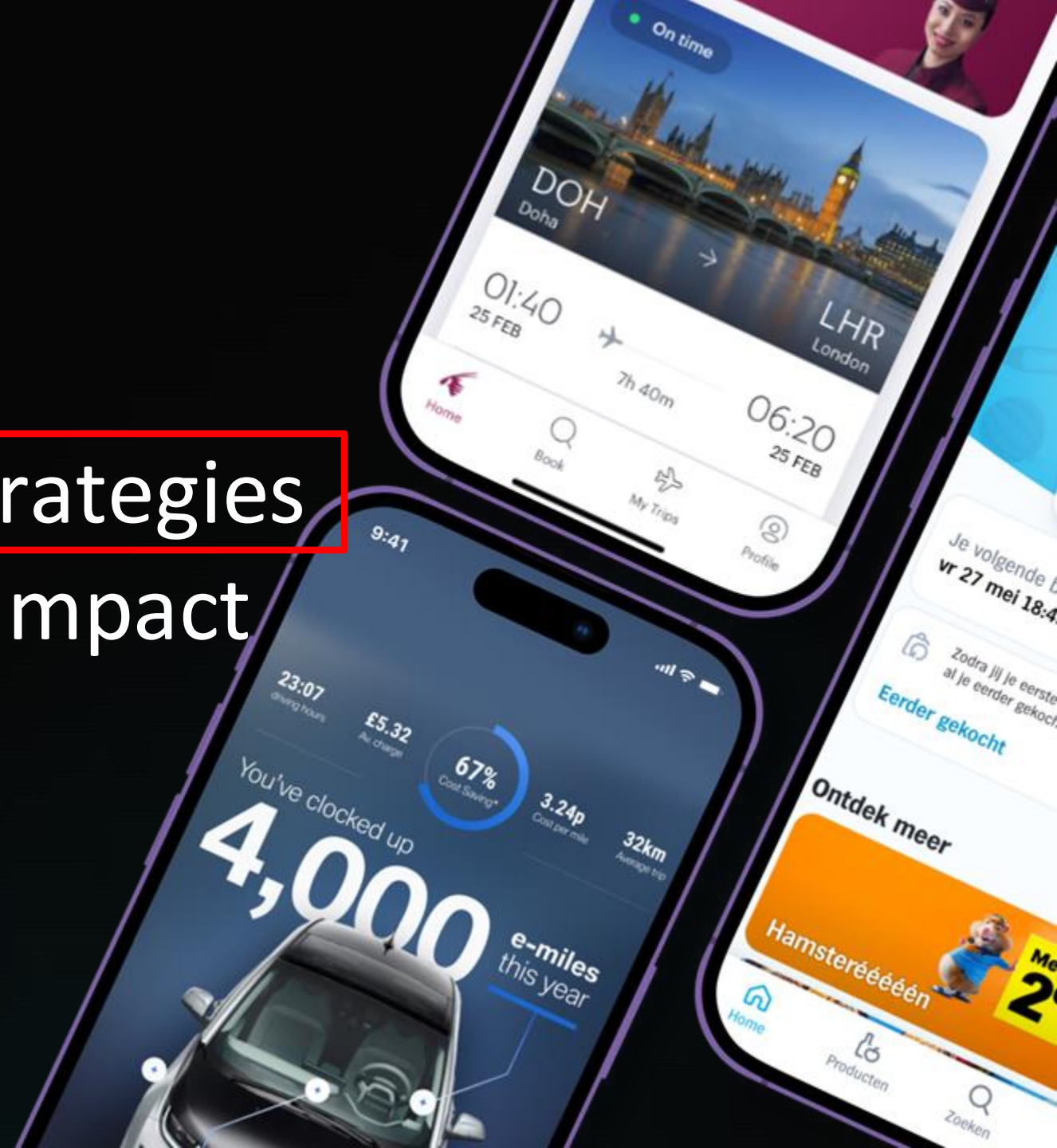

A Mobile Development Strategy is a plan of action for creating and deploying mobile applications, including goals and objectives, selection of platforms and devices, technologies and tools, development process, marketing and launch, as well as maintenance and updates

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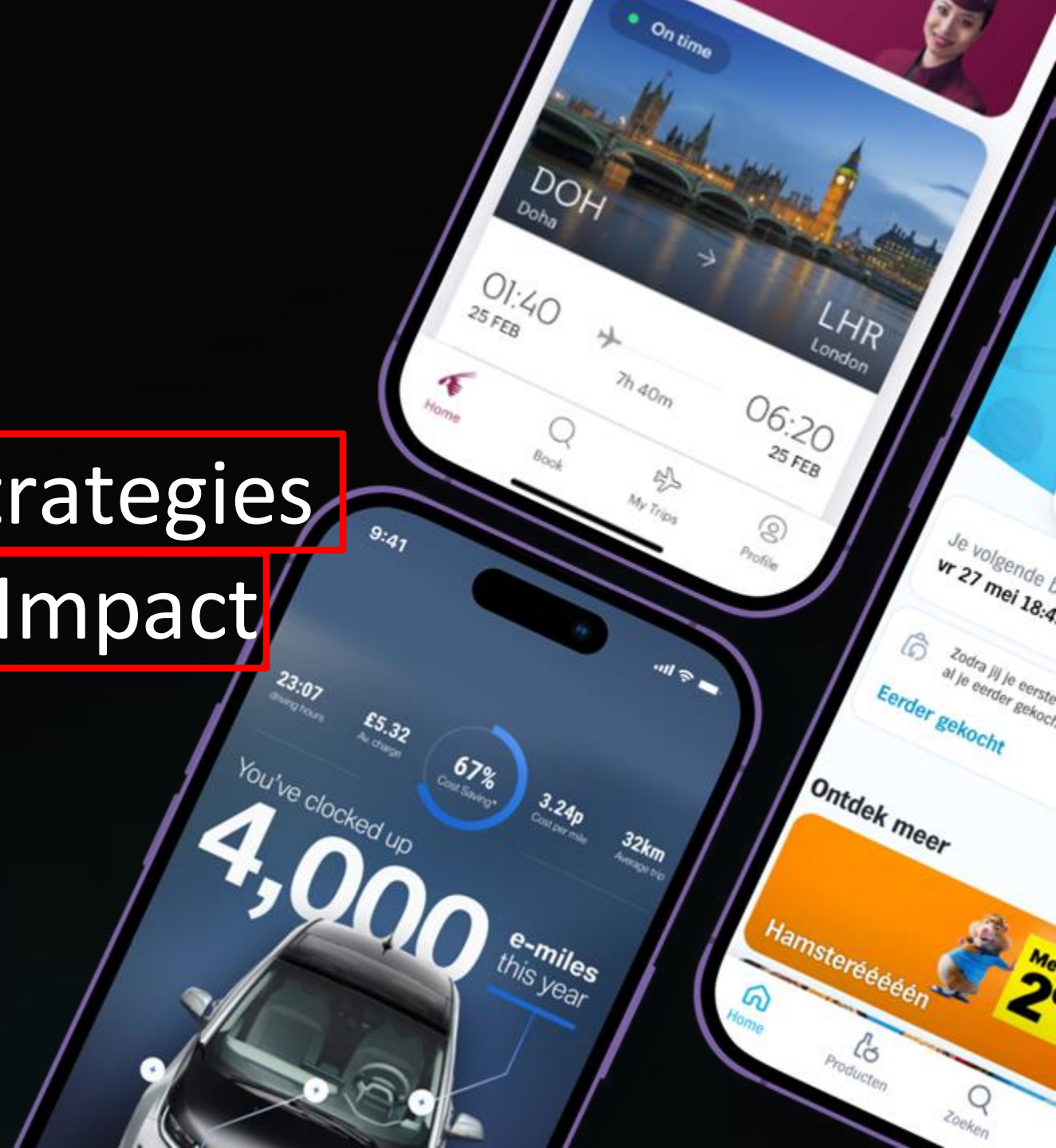

A Business Impact refers to a positive effect that can be achieved by a business from its actions, decisions, or strategies. This means optimizing resources and efforts to achieve the highest level of profit, efficiency, or competitive advantage

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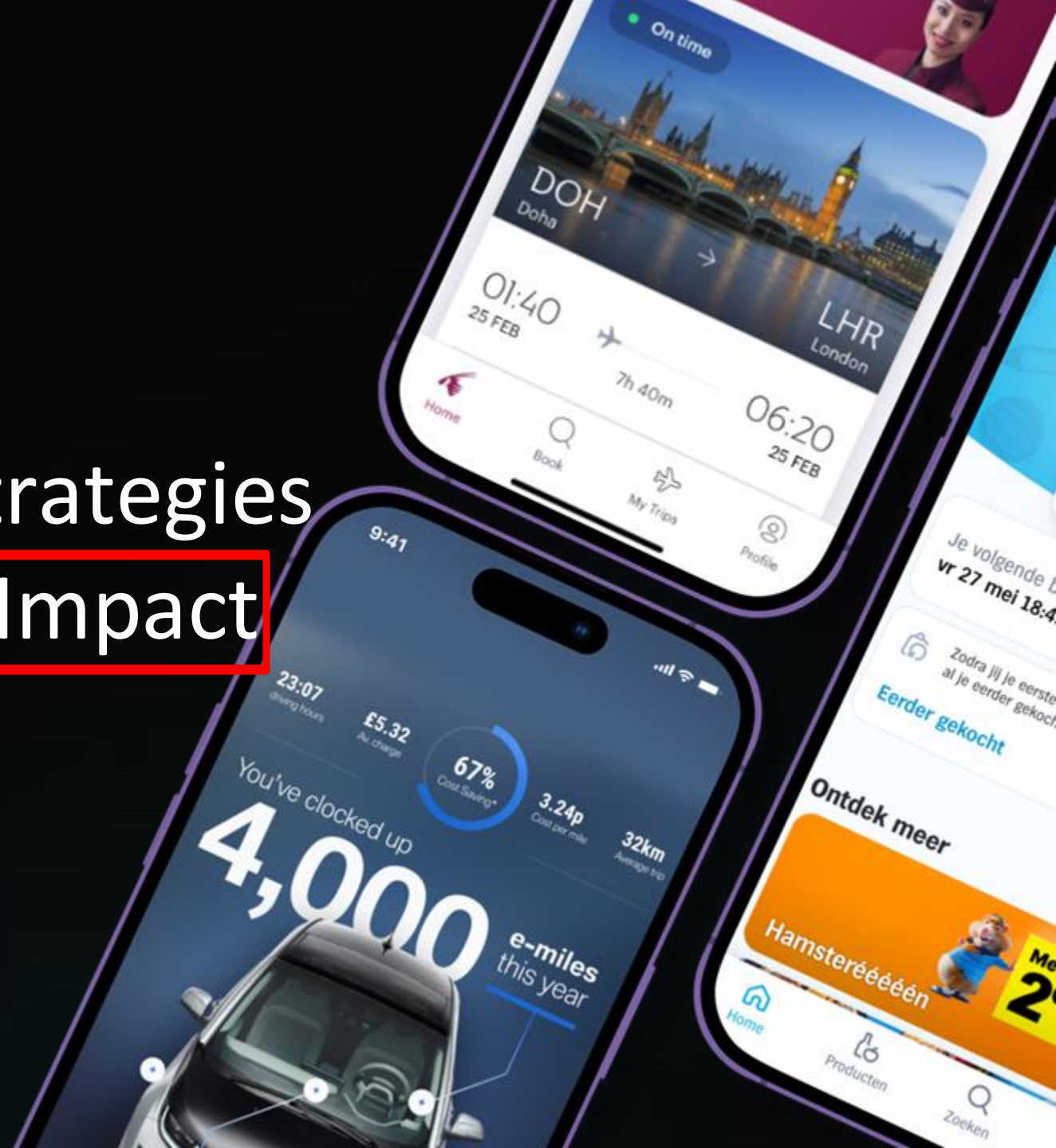
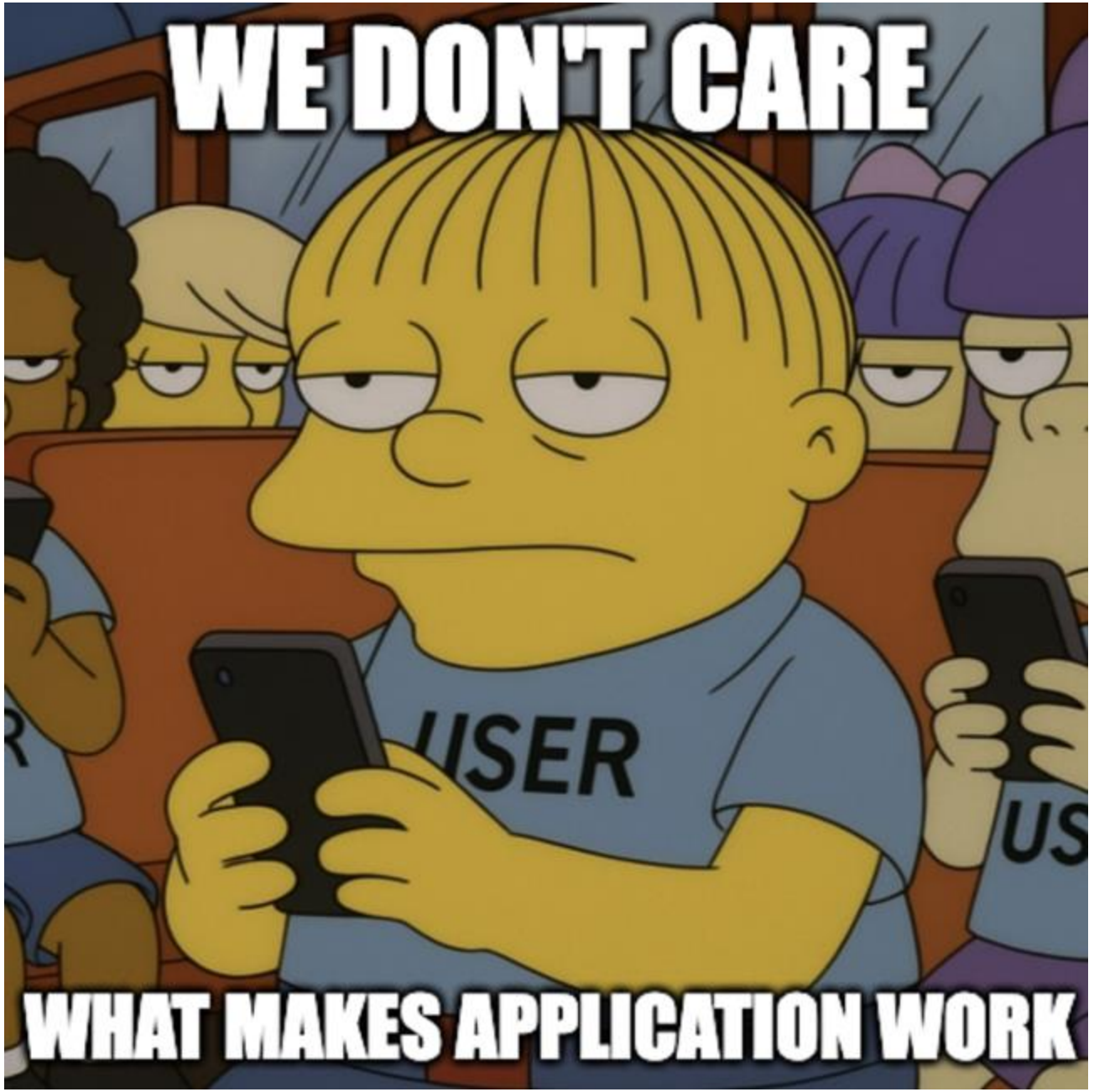



REVENUE GROWTH
USER ENGAGMION
INNOATE EDVAAIETIOY
REVENUE GROWTH
REVENUE GROWUE
UBE
COMPATIVE EDVAITIGE
USER RETENTION
USER RETENTION
CUSTOMVE RNTAGATION
EDFERCATION
INNOVATION
Social Dorseeriony
INNOVATION AND SCALTAGY
SOCIAL ADVAITIGY
& SCALLABITY

Technology Selection


WE DON'T CARE
USER
WHAT MAKES APPLICATION WORK


TECHNOLOGY IS JUST A VEHICLE


TECHNOLOGY
~~VEHICLE~~ CHOICE MATTERS

Modern mobile development approaches provide the variety of capabilities

PURE NATIVE

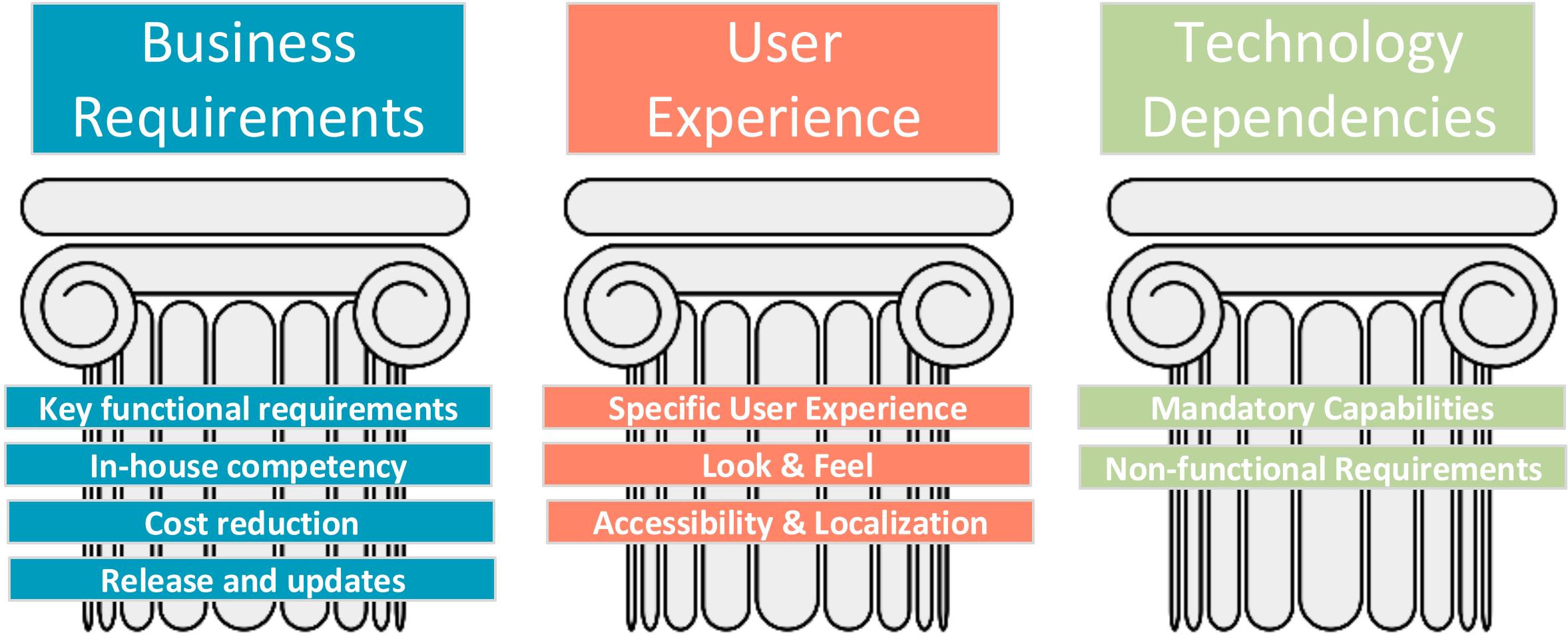
CROSS-PLATFORM

HYBRID

PROGRESSIVE WEB APP

IMMERSIVE

Three pillars of technology choice decision making



TO SWITCH OR NOT TO SWITCH, THAT IS THE QUESTION

1. Identify business outcomes or KPIs
2. Validate - Find case studies that match these closely
3. Optimize your business & Project your gains
4. Project utilisation of gains
5. Compare gains with technology choices
6. Implement and measure benefits

1

- Identify business outcomes or KPIs

Examples:

- *Engagement*
- *Online Sales*
- *Weekly Mobile Users*
- *Critical Defect Reduction*
- *Release Cycle Optimization*
- *Developer Efficiency*

2

- Validate - Find case studies that match these closely

- *Same KPIs and metrics*
- *Same industry*
- *Same technical stack*

<epam>

What did we learn?

3 • Optimize your business & Project your gains

- *Development Optimization*
  - *Fix technical debt*
  - *Have more effectively onboarding*
  - *Do more Pair Programming*
  - *Do better Documentation*
  - *Improve Communication*
- *Operational Optimization*
  - *Make the Dev environment stable*
  - *Fix the Build pipeline*
  - *Drive down Context switching*
- *Strategic Optimization*
  - *Have a better System Architecture*
  - *Reduce Platform Drift between iOS & Android*
  - *Get Requirements to align better with business silos and readiness*

You can achieve 1.2x - 1.5x gain
if you successfully do all of the changes

Developer efficiency before

and after optimization

imgflip.com

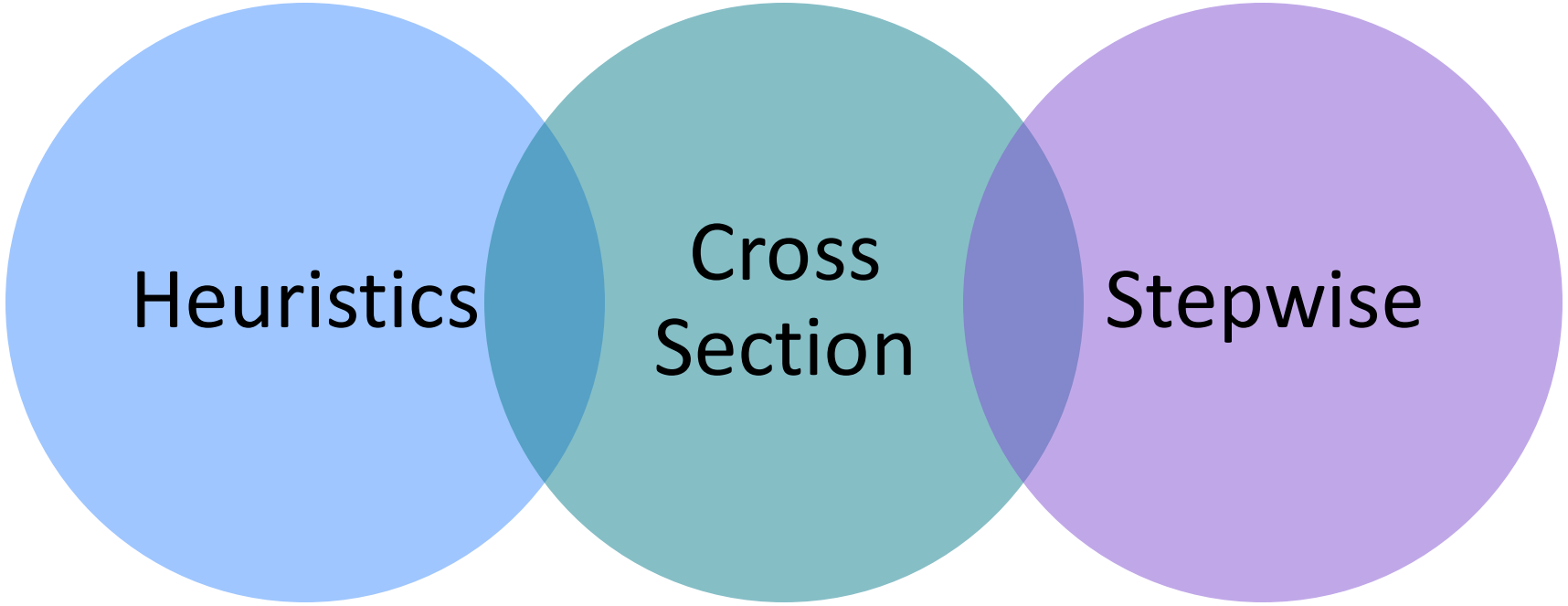
4 • Project utilisation of gains

- *Engagement*
- *Online Sales*
- *Weekly Mobile Users*
- *Critical Defect Reduction*
- *Release Cycle Optimization*
- *Developer Efficiency*
- *Save Money*

5

• Compare gains with technology choices

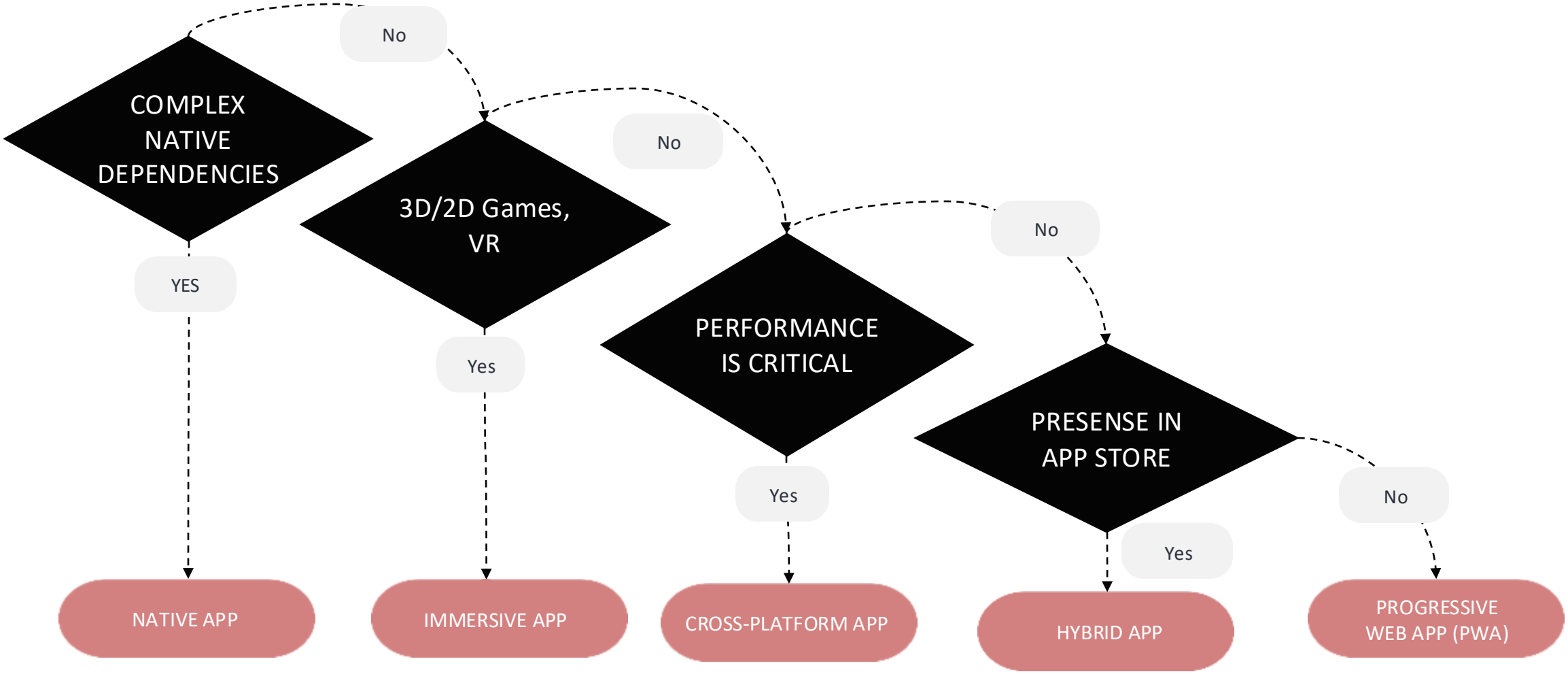
ways to identify an optimised technology choice



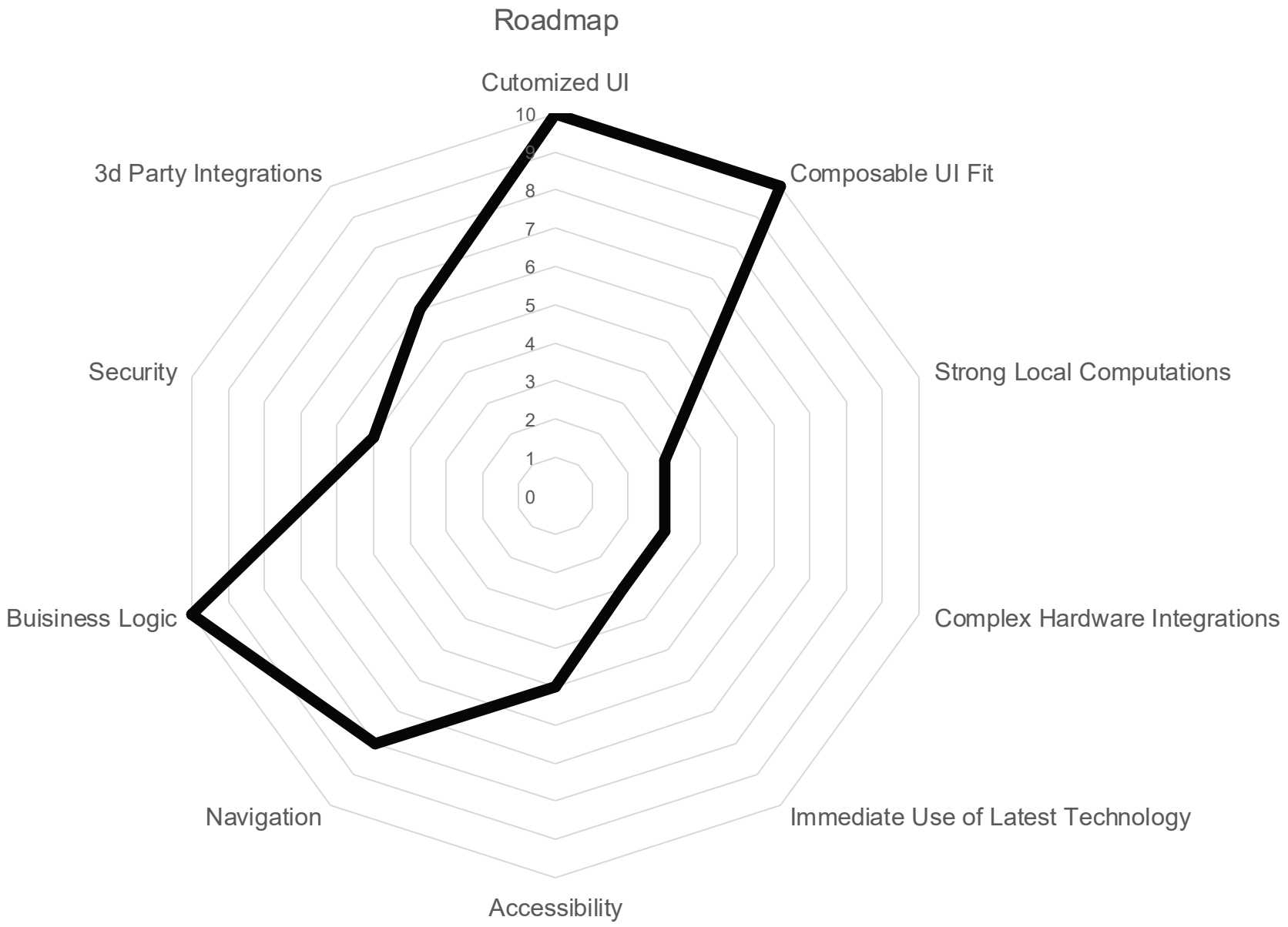
Mobile development approaches high-level heuristic comparison

	NATIVE	CROSS-PLATFORM	HYBRID	PROGRESSIVE WEB APP
MATURITY	4	3	3	2
ROADMAP AND SUPPORT	4	4	3	2
TARGET PLATFORMS	2	4	3	3
CODE & UI REUSABILITY	1	4	4	3
COMMUNITY SUPPORT	4	4	4	4
DEVELOPERS EXPERIENCE	4	4	4	4
LOOK & FEEL	4	3	2	2
COMPLEX UI	4	4	3	4
NATIVE CAPABILITIES	4	3	2	2
DISTRIBUTION & UPDATES	2	2	3	2
APP PERFORMANCE	4	4	2	3
APP BUNDLE SIZE	4	2	3	4

Business needs to make the right approach selection



Cross Section Analysis



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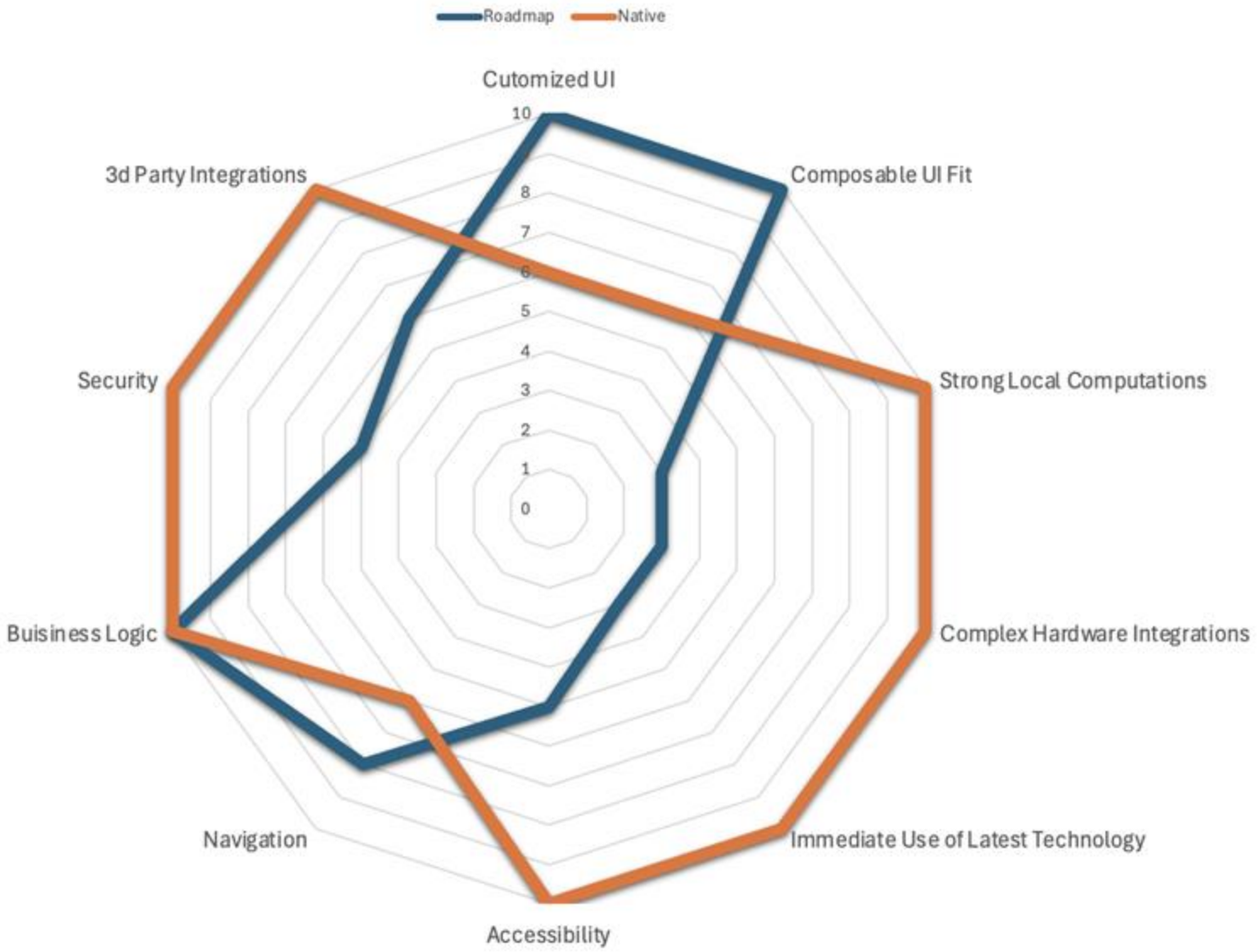
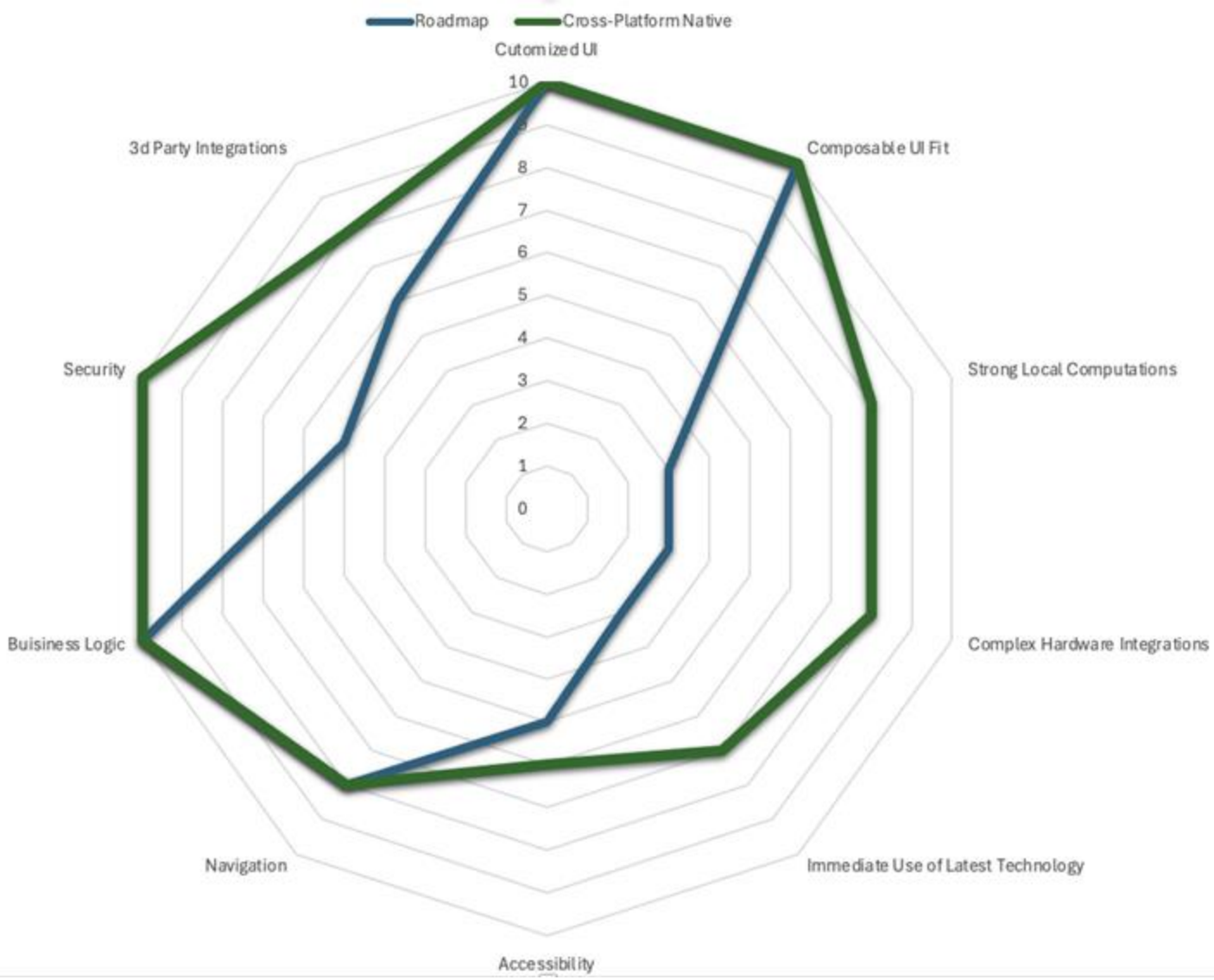


Cross Section Analysis



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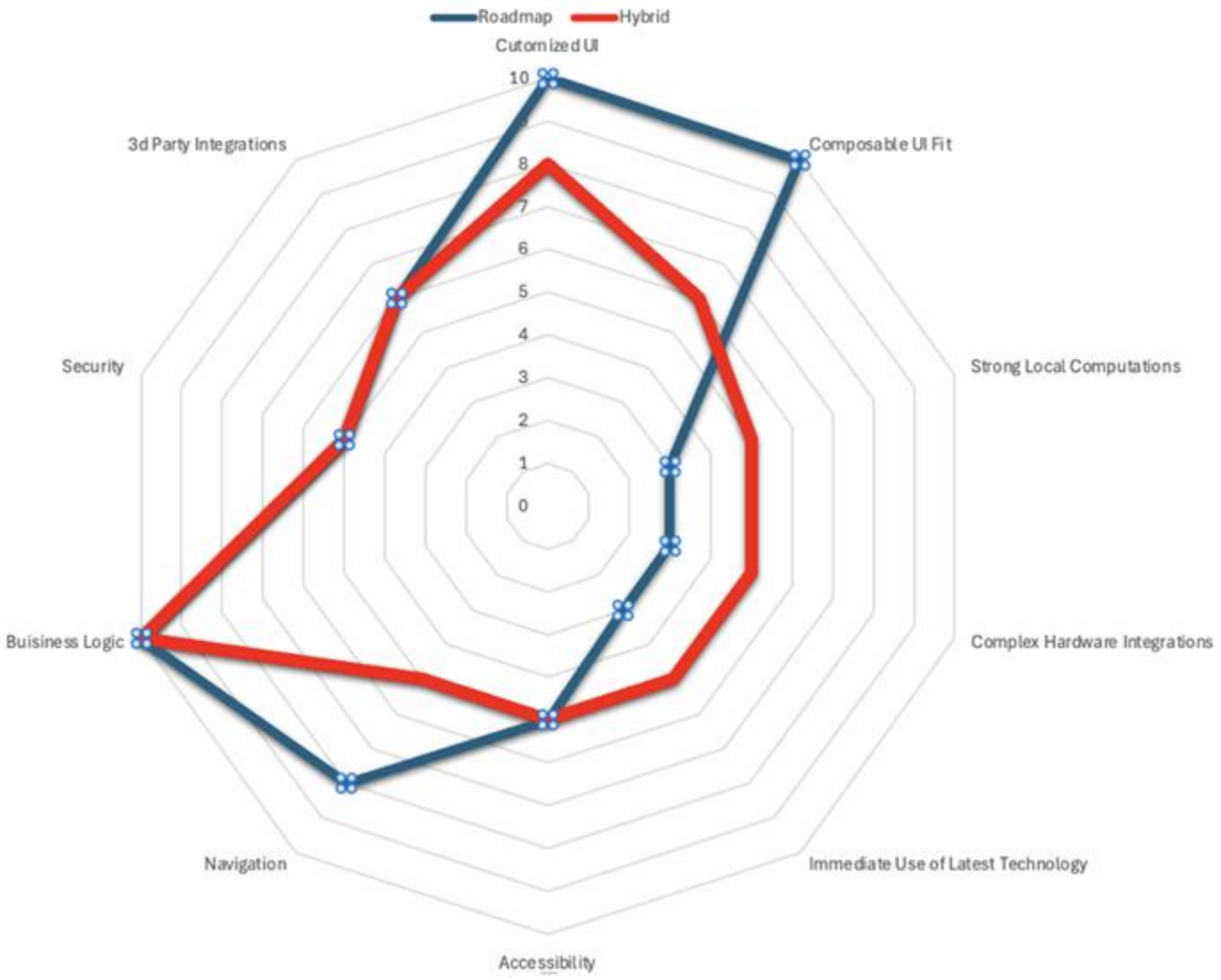

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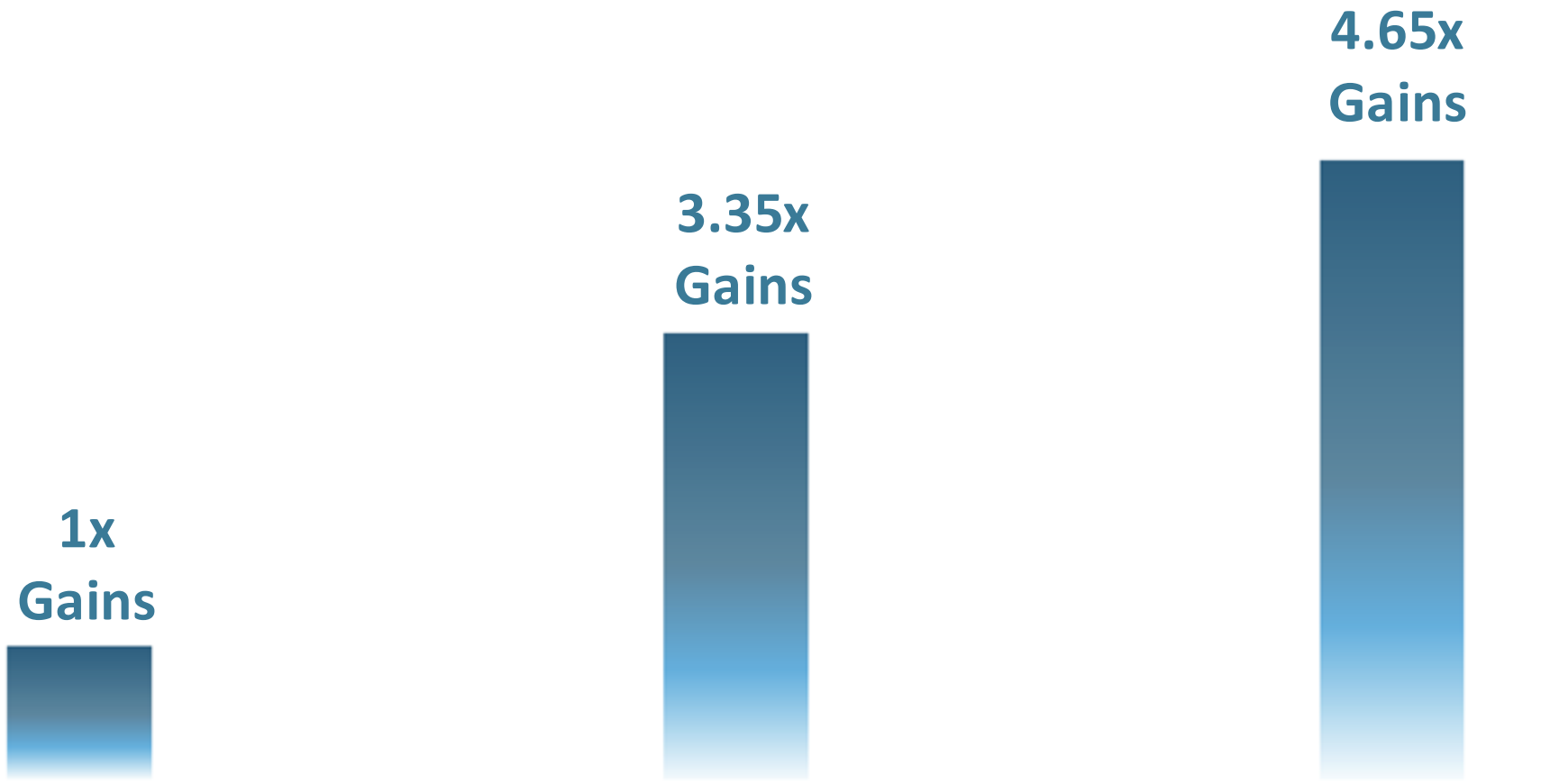
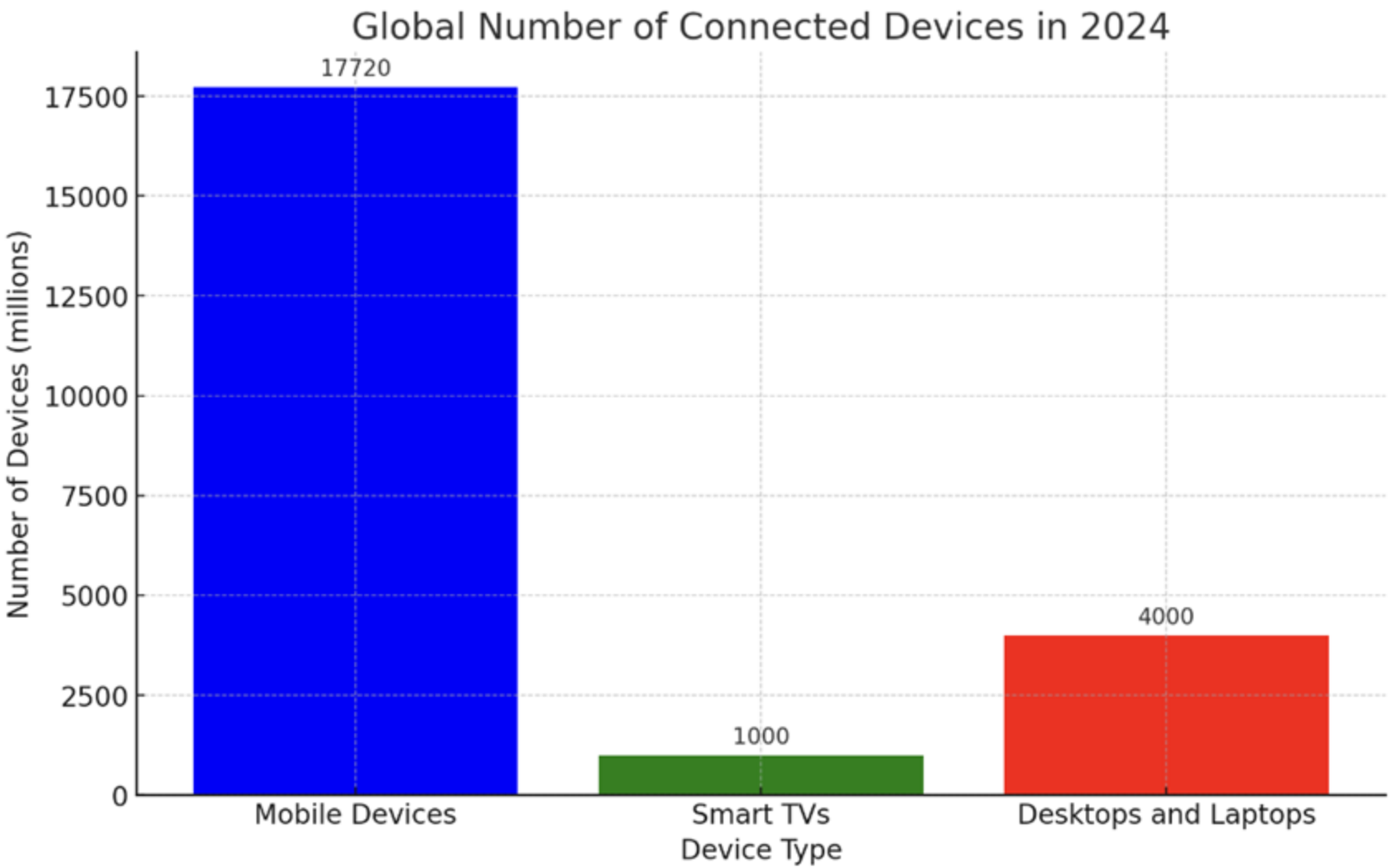
• Implement and measure benefits

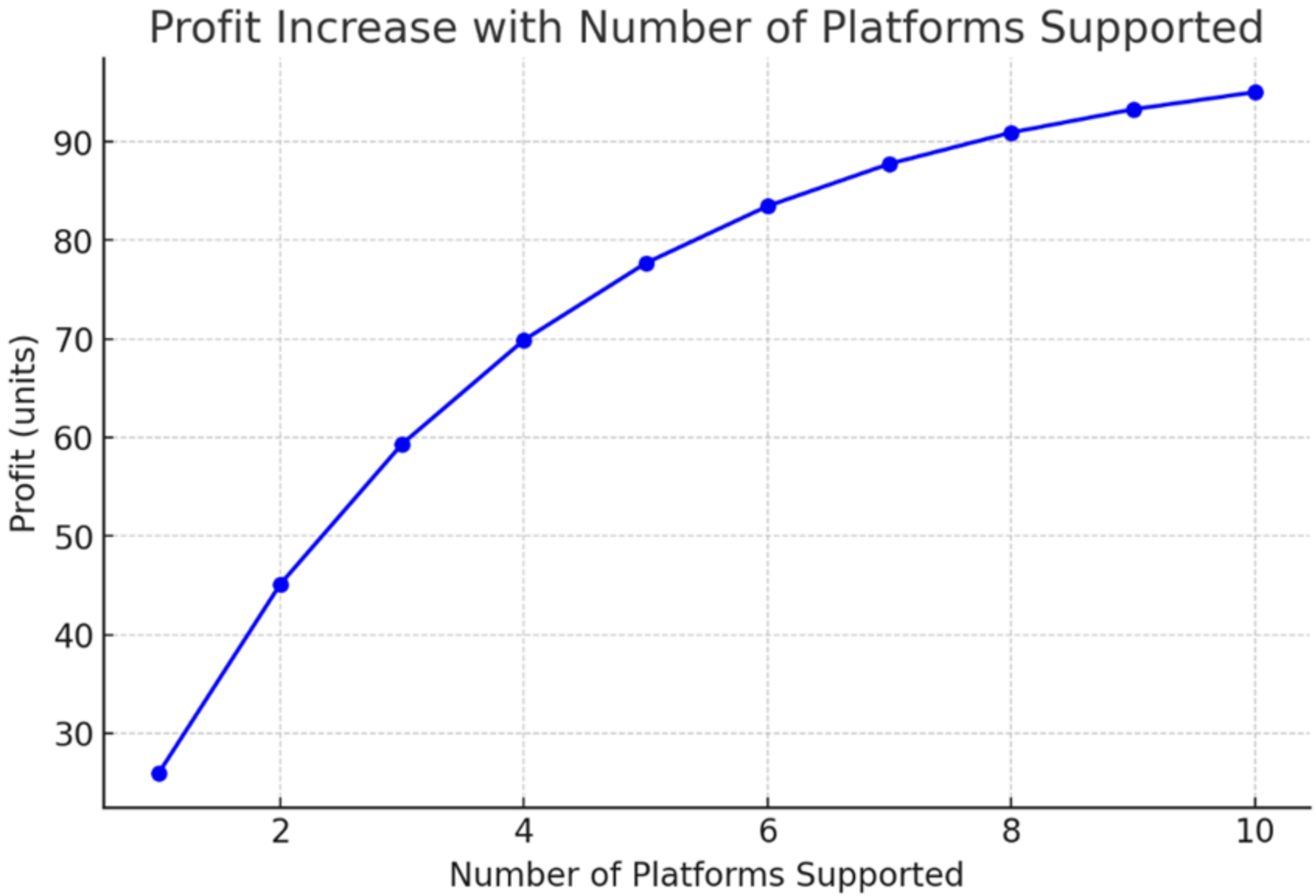


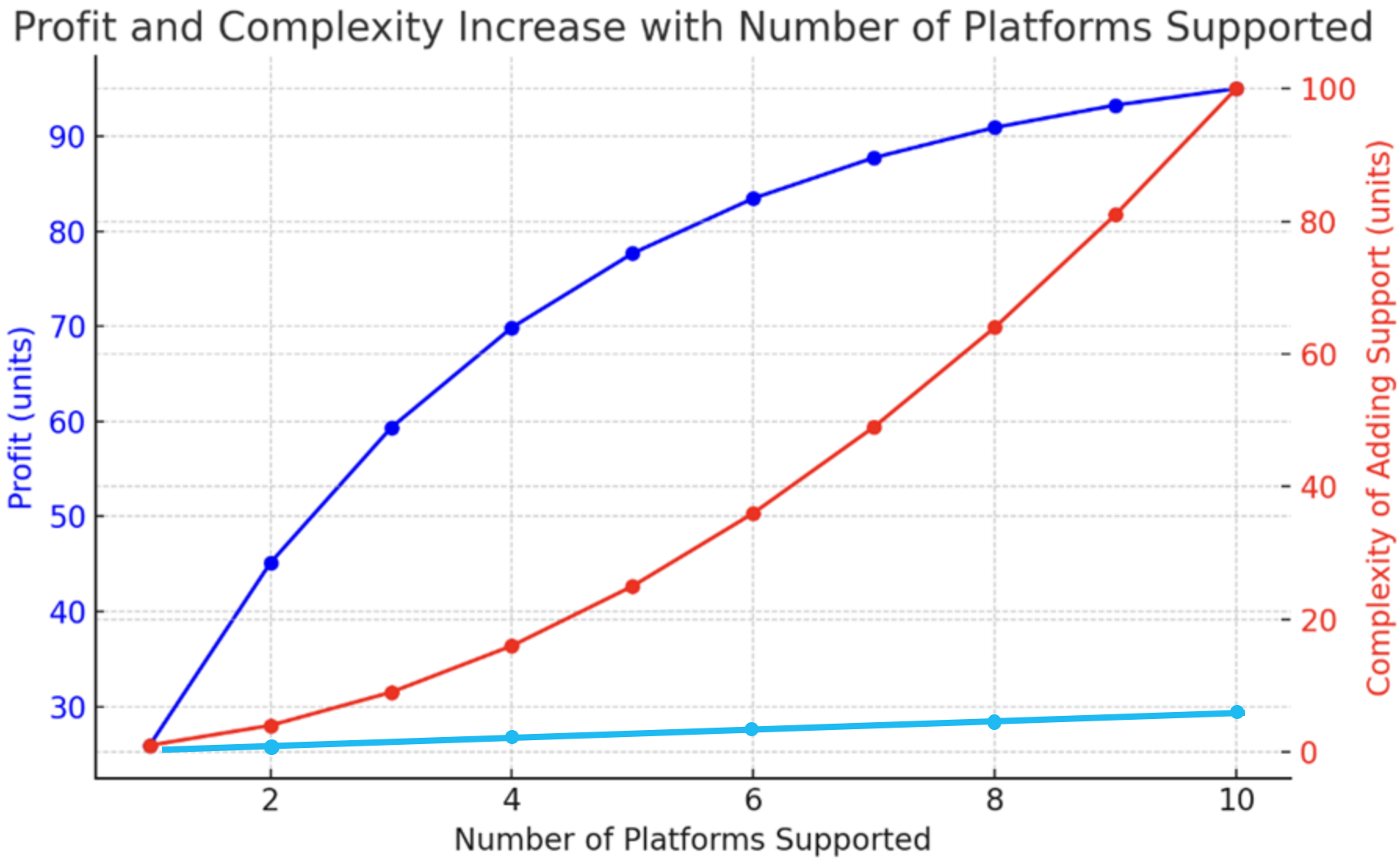
Expanding Mobile Solution

Web, TV, and Desktop Platforms

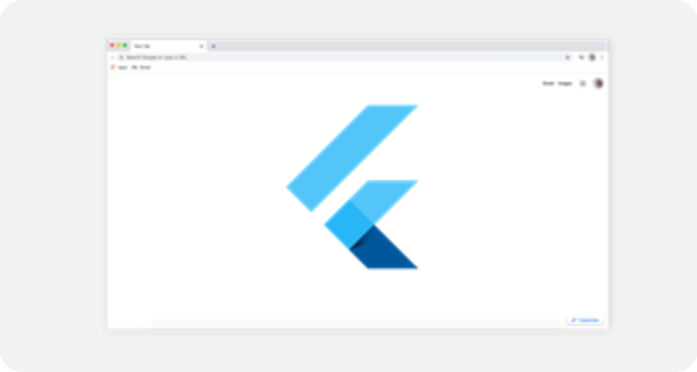
Not mobile only


Global Number of Connected Devices in 2024
Number of Devices (millions)
0
2500
5000
7500
10000
12500
15000
17500
17720
1000
4000
Mobile Devices
Smart TVs
Desktops and Laptops
Device Type


Profit Increase with Number of Platforms Supported
Profit (units)
90
80
70
60
50
40
30
2
4
6
8
10
Number of Platforms Supported


Profit and Complexity Increase with Number of Platforms Supported
Profit (units)
Complexity of Adding Support (units)
Number of Platforms Supported
30
40
50
60
70
80
90
0
20
40
60
80
100
2
4
6
8
10

Flutter Supported Platforms



Flutter for Web

Flutter for Web is an excellent way to develop web applications, especially considering the ability to reuse 100% of mobile code. Flutter offers a new approach to web development using canvas rendering and even allows for compilation into WebAssembly. EPAM has been developing web applications with Flutter since 2019 and has extensive experience implementing any task and solving any issues related to Flutter for Web.

Flutter for Desktop

Flutter for Desktop is an excellent alternative to Electron and ReactNative for developing desktop applications, and EPAM developers already have good experience with Flutter development for desktop platforms. We take the best from our mobile and web experience and apply our knowledge to build high-quality desktop apps without compromising compatibility or performance.

Flutter for TV Platforms

EPAM has a great experience in implementing TV applications on Flutter for TV platforms such as AndroidTV, FireTV, AppleTV, Tizen, WebOS.

This way, it is possible to publish applications for different TV platforms using a single code base.

EPAM even contributed to the open-source fork of Flutter framework for working with AppleTV, and therefore has exclusive experience in developing for this platform.

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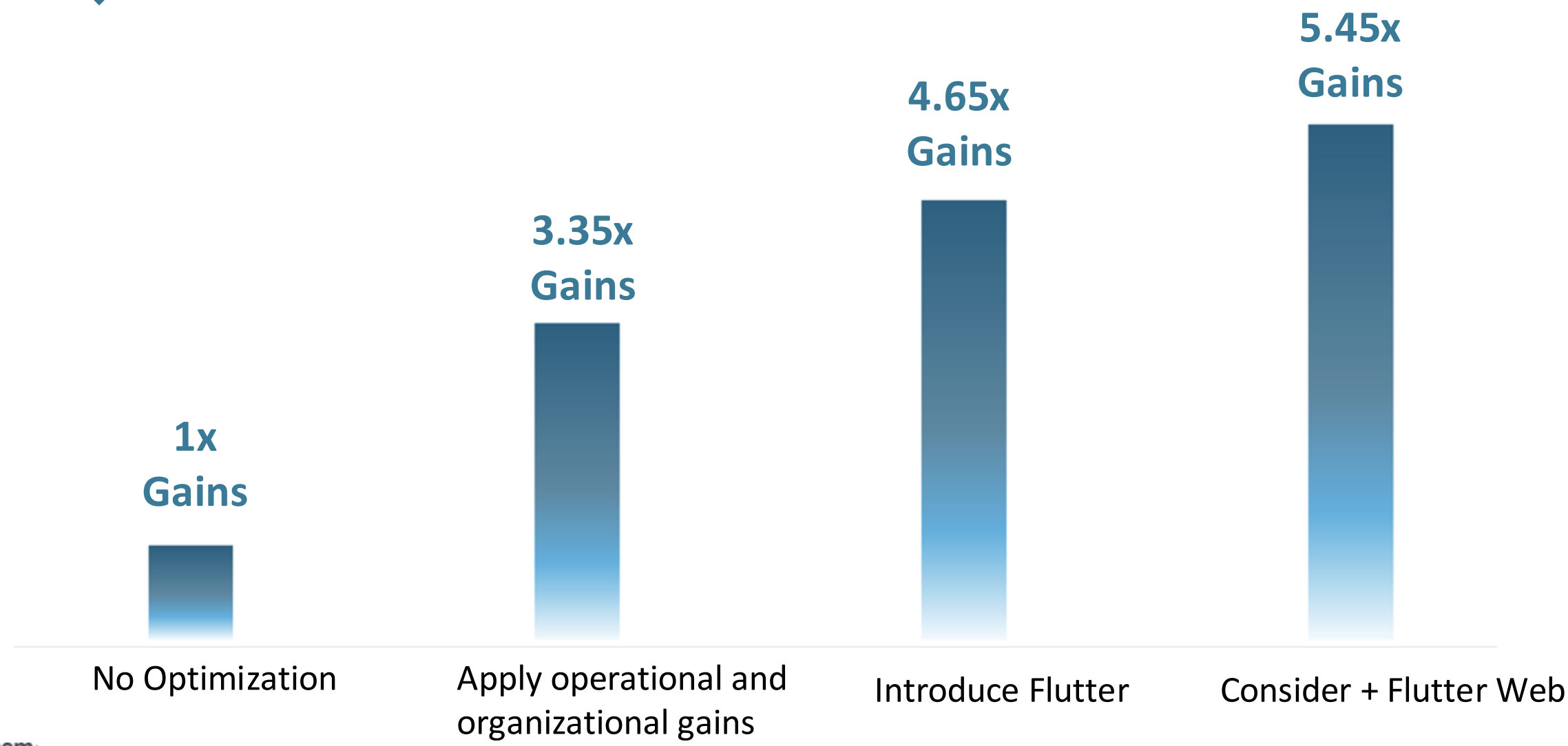
• Expanding Mobile Solution



Leveraging AI for Optimization

7

- Leveraging AI

AI for Accelerating Mobile Development:

- Code Generation & Assistance
- Intelligent Testing & Debugging
- AI-Powered UI/UX Design
- Project Management & Analytics

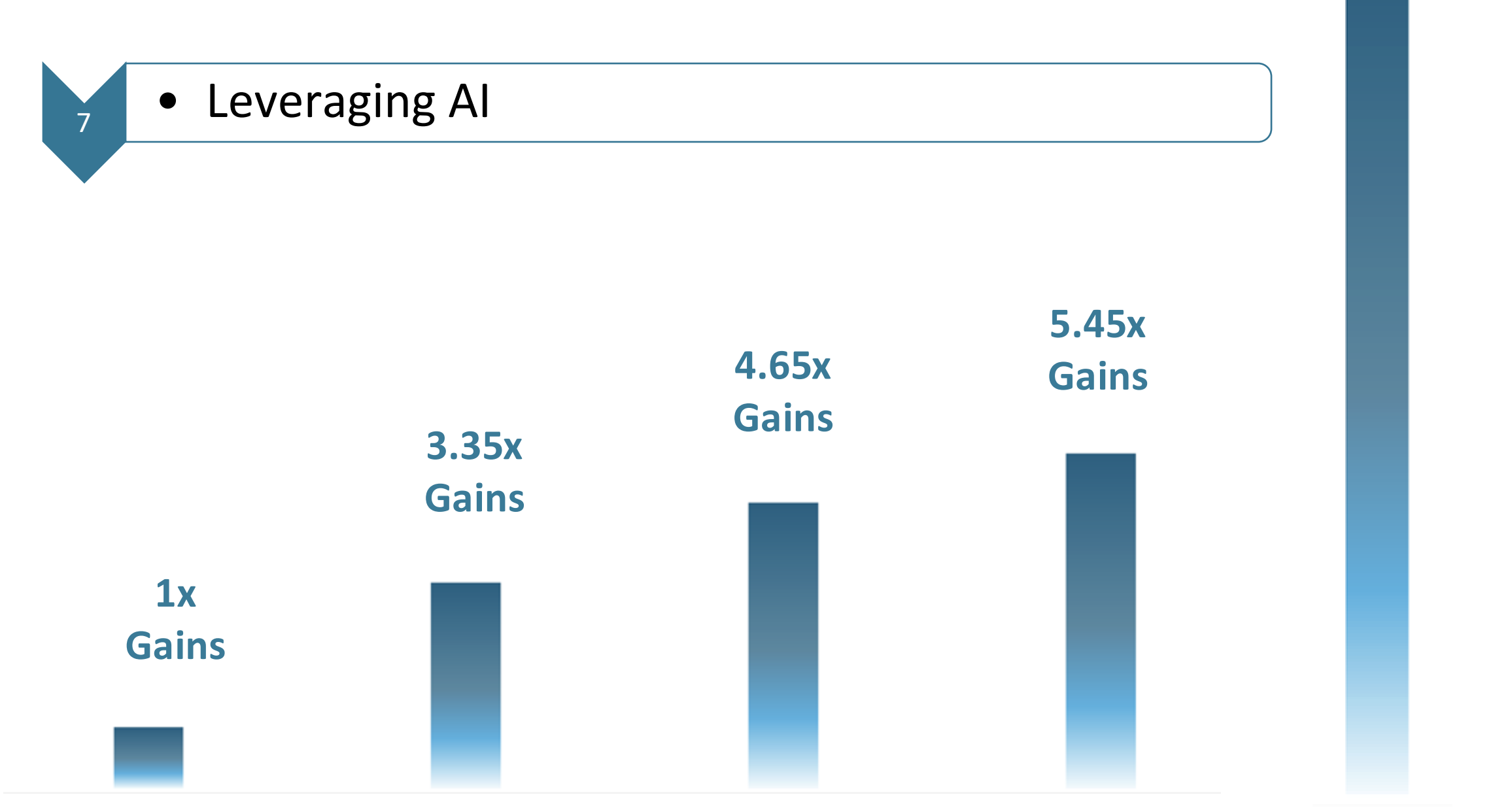
Reduced time, less routine

Higher quality, faster releases

Rapid prototyping, better UX

Data - driven decisions, metric growth

• Leveraging AI

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Thank you

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