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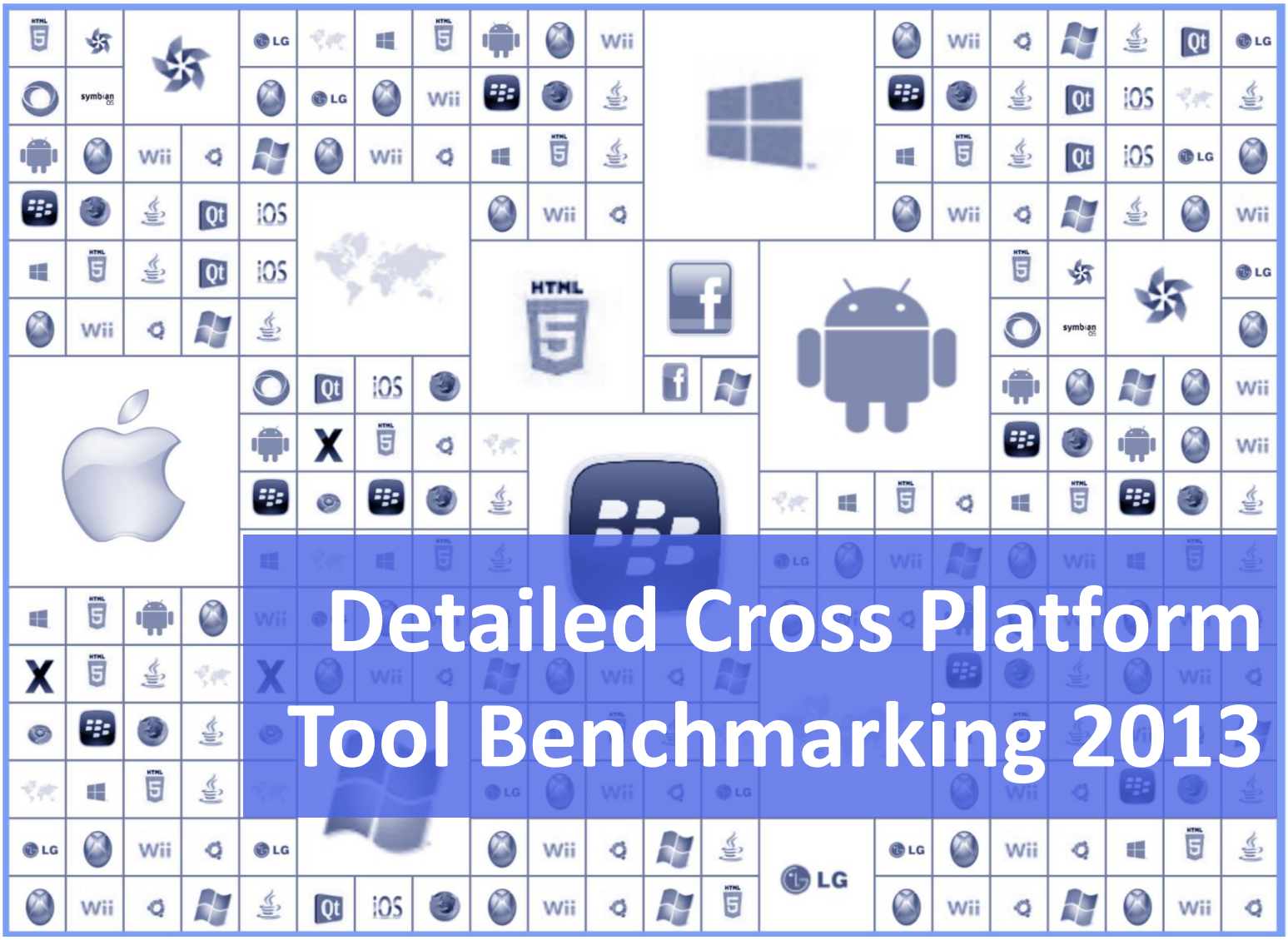

Detailed Cross Platform Tool Benchmarking 2013

A comparison of 10 leading tools for multi-platform app development

October 2013

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1. KEY TAKEAWAYS

Over the course of the last five years, multi-app and multi-platform app publishing have become common for developers who have become increasingly aware of second-tier platforms like BlackBerry and Windows. The result has been an increase in complexity, as well as in development & maintenance costs.

Cross Platform Tools (CP Tools) promise to reduce the complexity and costs it takes to develop apps for multiple mobile, desktop and other platforms (in-car devices, TV, game consoles).

The CP Tool landscape has grown over the course of the last 2-3 years and **it has become increasingly difficult to select the right platform for an app project** or even a portfolio of apps.

This report compares 10 of the most used CP Tools along a set of 16 criteria which span from platform support to overall cost-efficiency.

The comparison is based on the results of the **largest developer survey, with more than 1,000 participants,** and was conducted in summer 2013, only **addressing the strengths and weaknesses of CP Tools in the market**.

In summary, the results show that **CP Tools have a significant impact on development time, costs and app quality**. But there are major differences between the CP Tools, of which every app developer must be aware of before selecting a CP Tool for his project.

The majority of CP Tools have not made it into the enterprise world. Tool 1, Tool 4, Tool 6 and Tool 5have the highest share (10%-20%) of users coming from large companies.

CP Tools in the benchmarking can be generally divided into two groups: CP Tools with a focus on the games industry and generalists. Tool 7, Tool 2, Tool 4, Tool 8 and TOOL 9 have a focus on game development. CP Tools that cater the games industry are in general of rather high complexity and thus require a longer time to get used to.

Support channel usage does not show significant differences amongst CP Tools. Users seem to have similar preferences. In contrast, the **quality of the support** services is rated very differently. Tool 3, TOOL 9 and Tool 10offer the best support service quality.

Overall, CP Tools are most frequently used for developing mobile apps for Android, iOS and Blackberry 10. App development for HTML targeting mobile and HTML targeting desktop follow with distance.

The highest **time-savings** for app development can be realized with Tool 4, Tool 7 and Tool 3. For all three tools more than 50% of their users were able to develop more than 50% faster.

CP Tools differ significantly in how intensively developers are using or rating APIs, pre-installed software and hardware features made accessible by CP Tools.

Across all users of CP Tools, the availability of cloud **API services** is rated of rather low importance. TOOL 9 and Tool 3 clients state the highest satisfaction with cloud API services. 30% of Tool 3 users and 18% of TOOL 9 users make extensive use of the services.

Across all CP Tools in the benchmarking, 60% of users regard the **accessibility of device hardware features** as "critical". Tool 3 users are the most satisfied with the service of their tool: 69% are satisfied or very satisfied with the accessibility of device hardware features.

Across all CP Tools, the **accessibility of pre-installed applications** is rated by 40% of users as "important". Tool 3 users are the most satisfied with the service. Tool 1 users are the least satisfied.

The results for all 3 benchmarked technology features indicate that Titanium users are the most demanding developers and view technology features most critically. They make the most use of APIs, device hardware access and pre-installed apps, but are the least satisfied with the offering of Tool 1. On the other hand, Tool 3 users tend to rate their tool support the most positively.

In terms of "**design features**", TOOL 9 and Tool 3 apps are rated best by far: 92% of TOOL 9 users and 89% of Tool 3 users describe their cross-platform apps as good as or even better than native apps in terms of design.

CP Tools overall are being rated positively by their users for the **usability quality** of their apps. Tool 3 is leading in usability as well.

Across all CP Tools in the benchmark, **performance** is the major weakness of cross-platform apps. Tool 2, Tool 3 and Tool 4 apps are rated best. Especially Tool 2 users (88%) do not see their apps as being of a lower quality than apps created with an OS-specific native SDK.

App **security** is rated the highest for Tool 3 and Tool 82.

In terms of generated **app revenues**, all tools are being rated positively compared to native app development. TOOL 9 users rate their apps the highest, followed by Tool 4 and Tool 2 users.

Overall, the **cost-performance ratio** is very high: on average 69% or more of the users rate the cost-performance ratio "okay" or "good value". Tool 8 and Tool 2 cost-efficiency ratings are the highest, with more than 50% of their users saying that the CP Tool has a good value.

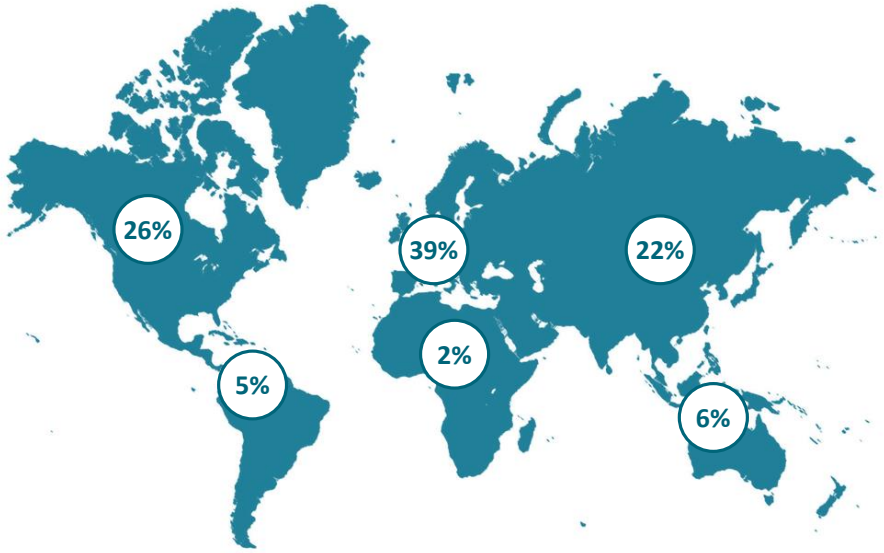
By comparing user ratings of 10 of the most used CP Tools, the report aims at **providing valuable insights for the selection of the best CP Tool for a specific app project or portfolio**.

2. BENCHMARKING METHODOLOGY

This benchmarking of cross-platform app development tools is based on a global survey conducted between May and August 2013. More than 1,000 respondents participated and shared their views on cross-platform app development tools (CP Tools).

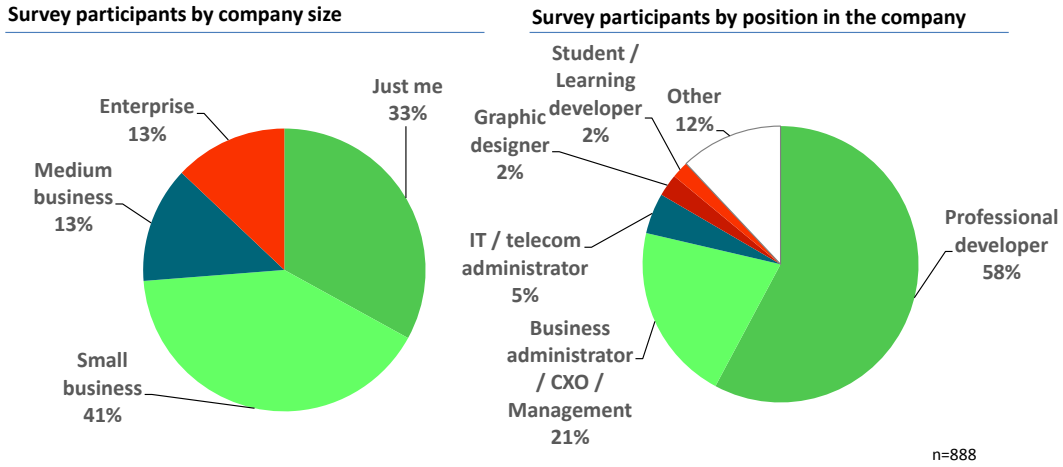
Participants come mainly from EU (39%), North America (26%) and Asia (22%), The major CP Tool user's country of origin are the USA (15%), Canada (11%), India (11%), Germany (10%) and UK (6%).

Figure 1: Geographical overview of cross-platform tool users



Tool user survey participants range from individual app developers to IT managers of multi-national corporations.

Figure 2: Background of cross-platform tool users



3. APP PROJECT DURATION AND TIME SAVINGS COMPARISON

CP Tools are designed to reduce app development time for multi- platform publishing.

The necessary development time is closely related to the size or complexity of an app project. A comparison of the CP Tools based on the app development time is therefore difficult, but development time can be used very well as an indicator for the complexity of the app which the developer tries to build with the help of a CP Tool.

If the average development time for an app is only counted in days or weeks (as in the case of Tool 4, Tool 3 or Tool 1) it is a safe guess to say that these tools are mainly being used to develop simple apps.

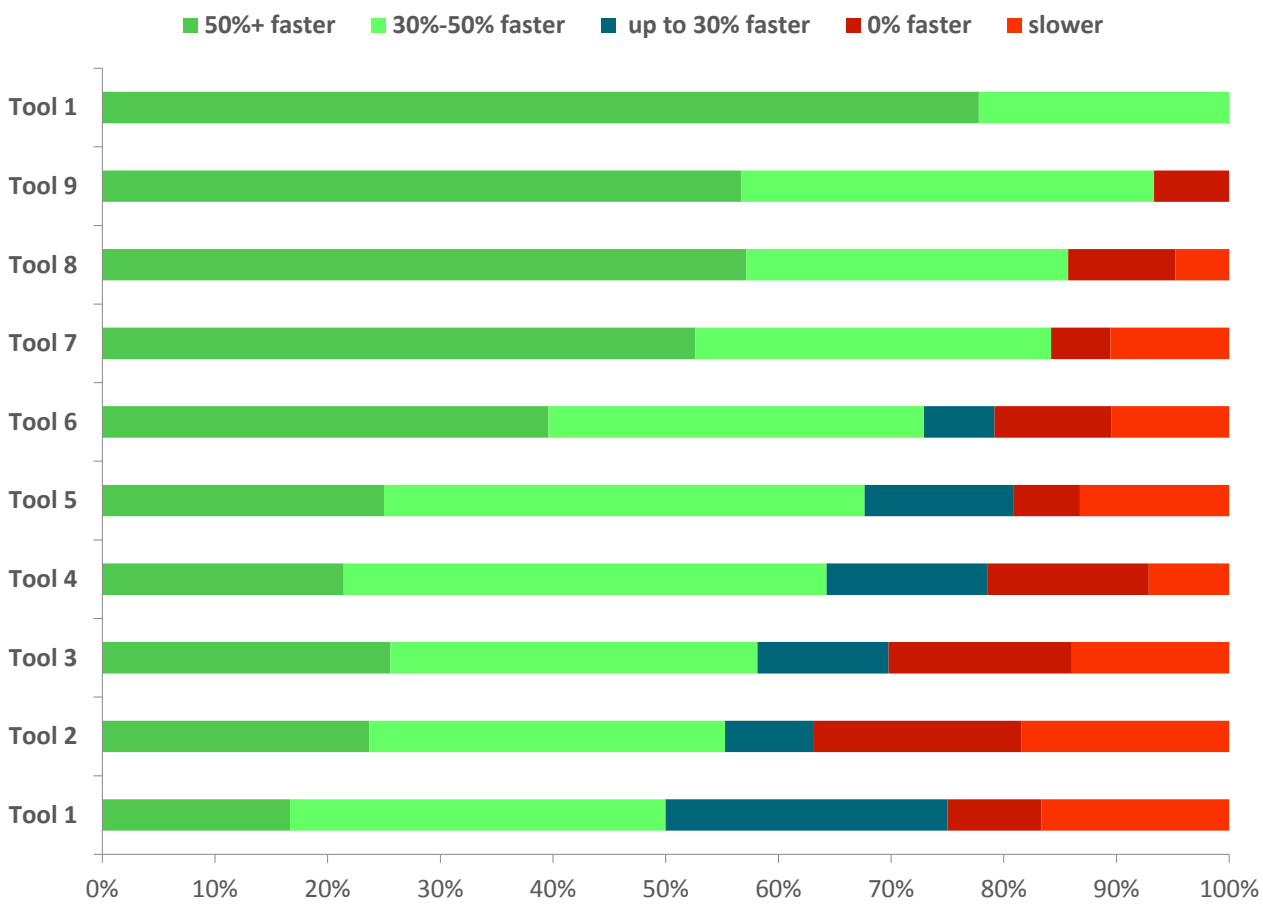
Tool 5 and Tool 8 are the tools that show the longest average project durations.

Against the background of the normal project length is the time saving, made possible by the use of the tool, an important indicator of the quality of the tools.

The highest time savings for app development can be realized with Tool 10, Tool 9 and Tool 8. For all three tools, more than 50% of its users were able to develop more than 50% faster.

Tool 1, Tool 2 and Tool 3 offer the smallest time saving for their users. The realized time savings of these tools are below average. In case of Tool 1, the high complexity of the tool (see above) might offset efficiency gains. For Tool 2, the short project durations might not give enough room for time savings.

Figure 3: Realized time-savings with CP Tools



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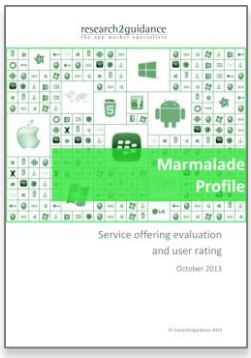
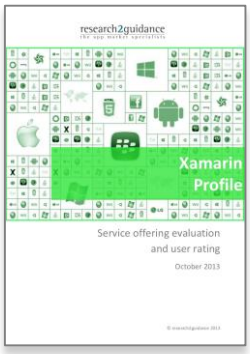


Marmalade Profile: "Service offering and user rating"



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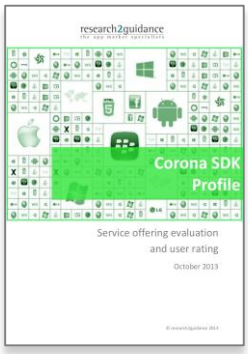

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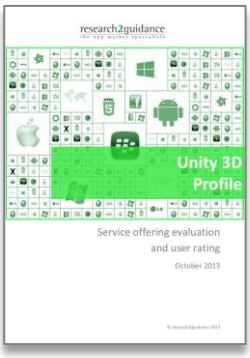

Unity 3D Profile: "Service offering and user rating"

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Need help with finding the right Cross-Platform Tool? Use our standardized CP Tool selection process to find the right tool for your app projects.
Contact the analyst Joachim Thiele-Schlesier: +49 (0) 30 609 89 33 60, js@research2guidance.com

APPENDIX

ABOUT RESEARCH2GUIDANCE

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App Strategy: We help our clients in and outside of the mobile industry to develop their app market strategy. Our consulting advisory projects are based on a set of predefined project approaches including: App strategy development, App Evaluation, App Market Segment Sizing, App Governance and App Marketing Spend Effectiveness.

App Market Reports: Our app market reports explore the major trends and developments affecting the app markets. Separate research papers provide both general and specific coverage of the market. The reports contain key insights for companies looking to enter or deepen their engagement with the mobile applications market, providing data and analysis on all relevant aspects of the market to ease investment decision-making.

App Market Surveys: We leverage our 70,000 app eco-system database to conduct surveys and reports for our clients.

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About the authors

The authors of this report have been following the app market and CP Tools for many years. The first report on multi-platform app publishing tools was published in 2010. Since then, two other reports which cover the market for CP Tools have been published.

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