



# How To Select The Best Mobile Technology For Your Environment

A professional's roadmap to evaluating mobility solutions the right way



# Start Your Mobility Journey The Right Way

Mobile technology has become almost mandatory in every industry worldwide. Every worker, regardless of their job, is now expected to be connected and visible to colleagues, customers, partners and prospects. It's critical for any operation that wants to remain competitive to "mobilize".

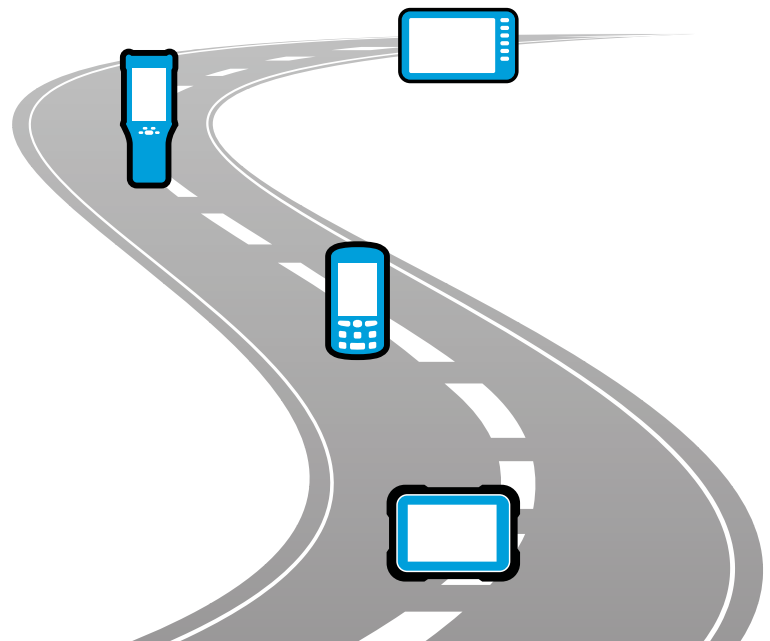
Mobility can include a range of solutions, including enterprise mobile computers and tablets to wearables and mounted computers. The right mobile solutions should deliver features that benefit your entire operations. Purpose-driven designs should have frontline users, workplaces and workflows in mind, providing ease of use, reliability and ruggedness. Unlike traditional systems of record, your digital mobility solution should enable data-powered environments that reflect your operations in real time. With collaborative mobile workflows, you can optimize in-motion operations. And with real-time data, you can connect assets and systems to deliver best-action guidance for business-critical decisions. The results of your mobile solution should create an integrated ecosystem to improve productivity across your enterprise.

But buying mobile technology for your workforce can be tricky. The crowded mobile device marketplace can make for a tedious and confusing buying journey, and many honest missteps can be made along the way. The good news is that you don't need extensive IT resources to source an effective mobility solution. You just need to know how to evaluate and buy mobile devices the right way for your environment.

**Follow this roadmap to evaluate your mobility needs, and reach your mobile destination without incurring costly detours or wasteful spending along the way.**

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## Remove Your Roadblocks

Mobile technologies can clear the road blocks preventing you from achieving greater productivity, business innovation, and the operational agility to adapt to future changes in the marketplace.



### Manual, Paper-Based Processes Slow Workflows and Risk Errors

Mobility can speed operations and reduce errors by making it easy to capture, analyze and apply massive volumes of data.



### Old Mobile Devices Increase Complexity and Limit Growth

Up-to-date mobile devices simplify and connect workflows. Rather than shoehorning you into limited capabilities, they allow you to adapt to changing requirements and integrate new and upcoming technologies.



### Underperforming Solutions Cross Signals and Cause Disruptions

The right mobile solutions reduce downtime during hardware and software upgrades, increase connectivity for mobile computers and tablets in the field, and help ensure your workers are always empowered for on-the-job performance, emergency readiness and responsiveness.



### Archaic Systems are Vulnerable to Cyber Attacks

Ensure your solution is designed with rigorous security, automated updates, easier access and centralized management to prevent security attacks from threatening your entire operations.



### Workers Can Be Hindered by the Wrong Form Factors and Lack of True Mobility

Your tablets and mobile computers should give workers what they want: true, real-time mobility with streamlined performance and superior ease-of-use—otherwise they won't fully adopt the devices and they won't achieve maximum productivity



## Did you know that many existing “mobility” issues stem from the device’s form factor?

Workers can be hindered by the wrong form factors and lack of true mobility. Fixed terminal PCs and laptops are not truly mobile. Handhelds and tablets are not necessarily mobile either, if they don't provide the complete computing capabilities required for true mobility. That's why it's critically important that you consider the real-time mobility of potential form factors for your solution early on in your evaluations.

## Get The Green Light

Is any project with a six-month payback automatically approved? Does it require a minimum 15% internal rate of return to even be included in the stack rank list of projects? Be prepared to submit a thorough and detailed business case, and plan to conduct a benefits analysis ahead of time to support your case. Project sponsors will want to see “the value” before they sign off on any project. Your finance department should have a template that you can use. If not, just make sure you know how long it will take for your project to pay for itself.

### Estimate Your Initial Budget and ROI

Define your budget for your business case. The most common ways to calculate the return on investment (ROI) for technology projects are breakeven analysis, payback period, net present value, and internal rate of return.

### Secure an Executive Sponsor

It will be hard to get anywhere without an executive sponsor backing your project. Get them on board with your plan before you get started to avoid wasting your time for months on end.

### Examine Your Current Resources

Don't assume that you know what your end users actually need or want. To understand firsthand what's working and what's not, spend time in the life of your workers. For example, “ride along” with plant floor workers or technicians during their shifts and ask for honest feedback. Discuss how new mobile devices could reduce waste and increase efficiencies in your environment. This feedback will be among the most valuable research you do to identify the right mobile solution.

### Build an Effective Project Team

Your project team will include multiple roles, and they will not all be tech experts. Your team may include workers, solution architects, software developers, original equipment manufacturers (OEMs), peers, partners, customers and third-party integrators. When building your team and delegating tasks, follow these guidelines.

**Define and communicate the exact criteria** for your mobility project, including your desired ROI, before delegating research and evaluations

**Stay connected.** Re-engage during the testing and selection phases if you want to minimize issues and/or repetitive sourcing projects in the near future.

**Give the team permission to think “outside-the-box”** literally and figuratively. Be prepared to consider other mobile technologies options along the way. This flexibility will pay off in dividends.



### When building your team:

- 1 Define and communicate the exact criteria
- 2 Stay connected
- 3 Give the team permission to think “outside-the-box”

## A Critical Step: The “Must Have vs Must Consider” Framework

Remember: You’re not buying for a traditional office worker. Don’t spec a mobile device like you would a desktop. Beyond security configurations, not much is the same due to the wildly different use environments and application designs from the office to the field. Articulate your requirements categorically using a “must have” vs. “must consider” framework.

Feature/Capability	Must-Have	Must Consider	Don’t Need	Justification	Specifications
<b>Operation System</b>					
Windows®					
Android™					
<b>Security</b>					
Encryption					
Multi-authentication					
Biometrics					
TPM					
SmartCard/CAC					
<b>Communications</b>					
Wi-Fi/4G LTE/5G					
Antenna Pass-Through					
GPS/Navigation/Dispatch					
<b>Interoperability with Existing Systems, Peripheral Equipment, Operational Technology</b>					
GIS					
Machine Sensors					
IoT/Wearables					
Back-office/ERP/Software					
Testing Equipment					
<b>Displays</b>					
Sunlight-readable					
Night Dimming					
Size					
<b>Mounting/Docking</b>					
2:1 Keyboard Option					
Ease of Use/Grab-And-Go					
Ergonomics					
Safety features					
Accessories					
<b>Maintenance</b>					
MDM/EMM Support					
IT Management Resources					
Target Lifespan					
<b>Ruggedness</b>					
IP rating					
MIL-STD-810 Specs					
Internal/External design					
<b>Performance</b>					
CPU Speed					
Memory					
Storage					
Solid State Drive (SSD)					
<b>Data Input Tools</b>					
Barcode Scanner Capabilities					
Digitizer Pen					
Keyboard					
Voice					
Video/Camera					



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Ask each manufacturer  
to show you why their  
devices are best,  
in real-life

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## Shop Around and Take Test Drives

### Reconfigure Your Budget Based on Your Requirements

Make sure that each line item directly correlates with your pre-defined criteria. Then confirm you still have buy-in from your executive sponsor.

### Explore Your Options

Use credible sources during your research, such as articles, analyst reports, white papers, user boards, peer reviews and case studies.

### Ask Plenty of Questions

Build a shortlist of providers, and request demos. Ask each manufacturer to show you why their devices are best, in real-life. Seeing is believing. Rugged devices are not always engineered or tested the same way.

- How do the devices hold up to: crash shock, wind and rain, drops, extreme temperatures, sand and dust and vibration?
- What are the shipping lead times?
- What are the third-party installation/implementation support and service policies?
- Is the support team accessible to the manufacturer's post-sale?
- What's the average failure rates for each device, as well as the average time-to-failure?
- What are the warranties and repair processes?
- Will I need an "uplift" service such as extra batteries? Special in-vehicle mounting kits? Upgraded warranties?
- Who will handle wireless activations?
- Is there any staging required for trials/pilots or the actual implementation? Or lead times required for delivery of pilot units? If so, will the solution provider be able to meet your timeline for delivery, configuration, etc.?
- Who is the point of contact for hardware or software issues during the pilot period or post-deployment? Someone internally, externally (i.e. the device manufacturer) or both.

## Try Before You Buy

While most wireless carriers don't allow consumers to try out new mobile devices before purchasing them, enterprise-grade mobile technology manufacturers encourage this practice for large deployments.

**1**

### Give Your Shortlisted Mobile Devices to Workers

Allow them to handle the device as they would if you weren't watching. Push them to the limits in multiple, real-life environments to prove the business case and confirm performance with complementary software and systems. We recommend a 30-day trial.

**2**

### Train Your Workers on the Mobility Solution

Take note of how long it takes to on-board users for both the hardware and the software. You can ask your mobility solution provider to provide training, so your internal team can see how they would on-board new hires. Do your devices have video-on-device training to accelerate training? Note how long it takes users to accept the solution. Consider how the device's ergonomics may impact their experience in every usage scenario.

**3**

### See How the Devices Integrate with Existing Technology

Will you need product or software diversification? Consider how you would capture and share data, how the devices work together within your systems, and what you can do to make workflows even more efficient. Will scanners, printers, RFID, or artificial intelligence optimize operations even further?

**4**

### Run Your Actual Workflow Software

Monitor performance. Document speeds, connection reliability, and security concerns. Determine if the issues arise from device insufficiencies or software/system design.

**5**

### Identify Gaps in Your Feature Wish List

Reassess your "must have vs must consider" designations. Make adjustments and additions, as necessary, based on actual results from field testing.



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Enterprise-grade  
mobile technology  
manufacturers  
encourage you to try  
out new mobile devices  
before purchasing them

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**Your TCO will compare product lifecycles, security costs and design features to make an accurate determination with a report featuring:**

- Detailed results by cost category and cost year
- Cumulative project costs
- Considerations beyond TCO
- The importance of TCO analysis
- Data entered into model and underlying assumptions

## Calculate Your TCO

If your selected solution still seems like a win-win, now's the time to get a more detailed estimate on the total cost of ownership (TCO) so you can "sell" it to other stakeholders. Consider how much you'll have to spend to see the project through to completion. Your technology provider may be able to provide a TCO calculator.

### Costs

- Base unit
- Core accessories
- Module
- Protective case
- Carrier subsidy
- Monthly carrier fee
- Annual service plan
- Suggested annual failure rate
- Modeled annual failure rate
- Replacement cycle
- User replaceable battery
- Inventory cost overruns or lack of materials due to insufficient planning/timing
- Business lost due to quality issues, supply chain inefficiencies, inability to meet deadlines or keep pace with rising demand
- Costs to address software incompatibilities or lost efficiencies due to inability to run the right software
- Cost of data input errors, lost data, or insufficient data to make effective decisions

### Considerations

- Time to decide on a solution and implement just one component and/or entire solution
- Time to refine (if bundled) every time new workflow capability is required, and to correct errors/ failures (either from inefficient methods, fragmented system...)
- Fully burdened hourly wage for frontline mobile workers
- Fully burdened hourly wage for IT staff
- Hourly sales revenue impact for device/worker downtime
- Average duration of frontline worker downtime (in hours) due to each incident of physical device breakage
- Average number of times per week that frontline workers experience network connectivity issues
- Average duration (in hours) of productivity loss per device failure due to network connectivity issues
- What percentage of frontline workers experience a battery that does not last a full shift each week
- Complete security control and easy accessibility for remote MDM/EMM





## Look to the Future

Does your solutions provider offer the agility to adopt upcoming technologies such as:

- Artificial Intelligence
- Carbon Net-Zero Emissions
- Mass Customization
- 5G/Wi-Fi 6/6E Capabilities
- Data-Driven, Prescriptive Analytics
- Robotics Automation
- Augmented Reality
- Machine Learning

## Insider Tips—A Review of Best Practices

A checklist of best practices to make sure your mobility journey goes smoothly start to finish.

- ✓ Get executive buy-in from day one. Without it, your project will get delayed if not canceled.
- ✓ Confirm exactly what the end-user will be doing with the device every day (via direct feedback) then determine which specs are needed to support every task.
- ✓ Assign the lead project manager early and involve them in the evaluation process. Decide if you need a helpdesk and who will manage it (you or the tech provider)—before you make a device decision.
- ✓ Pick your software first, test it (on multiple devices if needed), optimize it, then start focusing on which device will be widely deployed to the field.
- ✓ Hold hardware fairs/vendor days to give end-users an opportunity to see, feel and ask questions about the devices on your shortlist. Also conduct 30-day field trials if needed to get real-world feedback.
- ✓ Keep the solution providers involved every step of the way, including the trial period. By inviting all hardware and software candidates to assist with solution refinement now, you're more likely to achieve success during the full deployment later.
- ✓ Choose a solution that best fits your work environment. (Note: rugged solutions will end up costing your organization much less when you look at hard and soft costs combined.)
- ✓ See how the devices integrate with existing technology and with the provider's wider portfolio. Integration with your existing solutions can save time and costs, and keep productivity moving. If the provider has a portfolio of easily integrated products, you will be able to diversify hardware and software much more effectively as your needs evolve

## The Right Partner Is As Important As The Right Solution

You need a technology provider that's working in your best interests, not just their own. Make sure they offer a support team that will work with you to deploy an effective mobility solution upfront, and continuously optimize the solution's capabilities to sustain performance levels over time.

How to tell if your technology provider is serving your best interests, or their own:



### Consider Their Responsiveness

Are they willing to help you for as long as it takes to identify and execute on the right solution? Will they be around after they receive payment?



### Test Their Agility

Can they can easily accommodate your unique interoperability demands with past, present, and future IT system architectures?



### Make Sure They Are Flexible

Ask how they can facilitate operational adjustments, without forcing you to make unnecessary changes to your entire technology structure that result in wasteful hardware and software spend.



### Evaluate Their Case Studies

Look at how the proposed mobility solution has performed for other customers.



### Be Sure They Are Right For Your Specific Needs

Verify that they are knowledgeable in the engineering and implementation of mobility solutions, as well as in your industry and your workflows specificall.



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Make sure your provider offers a support team, and will continuously optimize the solution's capabilities to sustain performance levels over time

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# More People Trust Zebra Mobile Computers for Enterprise Than Any Other Manufacturer in the World

For over 50+ years, we have been the unmatched global market leader in rugged mobility. Decade after decade, we've been committed in the long run to providing you with the best in enterprise technology. The fact is that more organizations trust Zebra than any other manufacturer in the world, including many Fortune 500 companies worldwide.

We are at the forefront of the Android™ revolution, the future of enterprise mobility. Since 2011, we've been championing the migration of the enterprise mobility sector from legacy embedded Windows® operating systems (OS) to Android. With the largest and fastest expanding portfolio in the entire market, we have the right enterprise Android solution to fit your specific application. For our portfolio of tablets specifically, we are OS neutral. We offer Windows- or Android-based tablet solutions to meet the needs of any use case in any industry.

Throughout our entire portfolio of mobility solutions, we deliver features and benefits no one else can. Using decades of innovation, we design and optimize every mobile computer for real-world usability and harsh environments. And we back Zebra Android mobile computers with a powerful and exclusive suite of intelligent software, apps and utilities—Mobility DNA. With such expansive capabilities, Mobility DNA boosts productivity, smooths integration, simplifies and secures management and accelerates app development.

When it comes to mobility, no one can push your performance edge like Zebra.

Learn more about how Zebra can help you streamline your evaluation process and select the best-in-class mobility solution.

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