



**ENSURE YOUR SCANNER TECHNOLOGY  
CAN BRIDGE THE GAP**



# INTRODUCTION

Will my store's scanners read a bar code on a mobile phone? Do I need to replace my front-end scanners? Are the bar codes on products changing to 2D? Should I upgrade now to imaging? Certainly these are questions many retailers are asking themselves; so, how do you know what is best for your environment and ultimately for your customer? NCR Human Factors Engineers have conducted extensive testing to help you understand the options and help you get the facts.



## Myth No. 1

## Laser scanners are a dead end

While retail scanning has come a long way, retailers' objectives haven't undergone much change. Productivity is still the name of the game, and "Items Per Minute" (IPM) is still commonly used to assess cashier and scanner performance. Customer throughput is critical to enhancing the customer experience, but there is also a quantifiable return on investment for the retailer. Studies show that laser scanning is the most efficient and cost-effective way to process 1D bar codes, hands down.<sup>1</sup>

**Walmart states it  
"can save \$12 million  
a year for every  
second it can cut from  
the checkout process  
in the United States."<sup>2</sup>**

How much is a second worth to your business? Ensure that moving forward with new technology doesn't force you to take a step backwards on productivity; it could be a very costly oversight.

THINK ABOUT IT

## Myth No. 2

### Imaging is the road to the future

While imaging has improved, traditional laser-based scanning offers advantages for high-speed pass-by performance and is less expensive.<sup>3</sup> If you are scanning primarily 1D barcodes, imaging may fail to deliver the expected performance and return on your investment. Imaging is a road to the future, but not the only way to get there. Imaging hybrid scanners can provide you with a platform that can be leveraged when the time is right, maximizing your return on investment and offering you an upgrade path over time.



Although mobile phones are on the rise, and 2D bar codes are showing up all around us, how does that affect the core task of scanning products in the store effectively? Even in cutting-edge retail environments, 2D and mobile scanning at the front end could account for less than 1% of daily scans.<sup>4</sup>

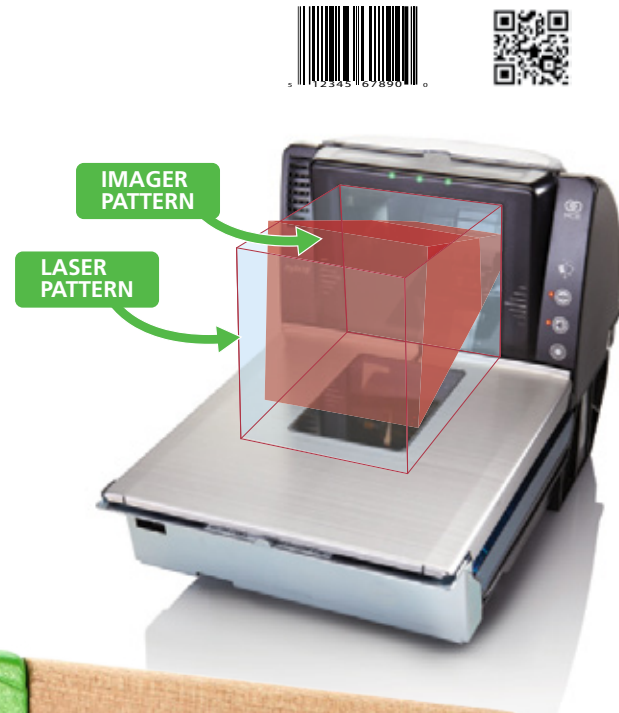




## Myth No. 3

# Imaging hybrid scanners are heading in the wrong direction

Imaging hybrid scanners offer the best of both worlds by combining imaging and laser scanning technology into one unit. Imaging hybrid scanners are an ideal choice for retailers requiring high-speed scanning capability combined with support for emerging 2D bar code formats. They combine the performance of laser scanning with the ability of imagers to read poor-quality bar codes and 2D formats. Imaging hybrid scanners enable you to start with laser scanning and then move to imaging as needed to protect your current investment in scanning technology while giving you a bridge for the road that lies ahead.



When the future is a bit uncertain, a building block approach can deliver value to address the needs of today, while offering cost-effective future proofing.

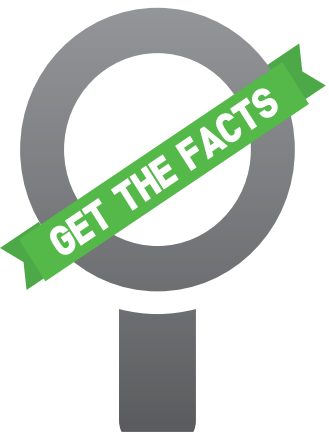
THINK ABOUT IT

# Myth No. 4

## Laser scanners are a maintenance problem waiting to happen

Traditional laser-based scanning is a mature, reliable technology. Based on historical data, laser technology has proven highly reliable in retail environments. While the underlying technologies used in laser-based scanning versus imaging-based scanning are very different, the maintenance and reliability are very similar. Certain components of imaging technology are of higher reliability, but there is no significant difference expected in the reliability and meantime between failures of the overall system.<sup>5</sup> Scanners are used in mission-critical point-of-sale (POS) environments, and no scanning technology can survive in retail without being reliable and of high-quality.

	LASER	IMAGER	IMAGING HYBRID
Scan a 1D bar code			
Scan a 2D bar code			
Large scan zone (no "sweet spot")			
Scan a bar code from a mobile phone			
Read a poor-quality bar code			
Scan speed/performance			
Ability to capture images			
Capability to scan on both planes			
Cost	\$	\$\$\$	\$\$



Retailers' scanners today are highly reliable and although changing technology will impact certain components, this will not change the overall projected reliability in day to day operations. Think about it: When was the last maintenance call you placed related to your scanner? Was it related to the scale or possibly due to calibration? History has shown that few calls are related to the scanning technology itself.

# CONCLUSION

Although new bar code formats are emerging and manufacturers' use of 2D bar codes is increasing, traditional laser-based scanning remains at the forefront. Each scanning technology—laser, digital, or hybrid—has its pros and cons, with hybrid technology delivering the ideal balance of performance and value. Imaging hybrid scanners, much like hybrid cars, offer additional functionality and benefits to bridge the technology gap and position you for the road ahead.

<sup>1,3,5</sup> NCR Scanner Engineering Research, 2012

<sup>2</sup> Wall Street Journal, September 3, 2012

<sup>4</sup> NCR Human Factors Engineering, 2012







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NCR Corporation | 3097 Satellite Boulevard · Duluth, Georgia 30096 · USA

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