



PHASE 2: UNDERSTAND YOUR SITUATION, YOUR GOALS, AND YOUR TEAM

Destination Ahead

Embark on an Automation Journey to Surpass Your Competitors



The Need For More

As established in our first e-book, your organization has a vision, but so do your competitors.

So how can you maximize your organization's efforts and surpass those of your competitors?

Start with introspection. Understand the relationship between your situation and goals and enlist a crew to join in the journey. This crew, comprising internal and external members, forms part of the peopleware that is an essential tenet of successful automation. The other two equally important tenets are hardware and software, which will be covered later in this e-book series.

Understand the relationship between your situation and goals and enlist a crew to join in the journey.



So how can you maximize your organization's efforts and surpass those of your competitors?

A futuristic, glowing blue tunnel with light trails and a road leading into the distance. The tunnel is illuminated with vibrant blue and cyan light trails that create a sense of motion and depth. The walls of the tunnel are curved and feature various light patterns, including horizontal bands and vertical streaks. In the center, a road with white lane markings curves into the distance, with a few small, glowing vehicles visible. The overall atmosphere is high-tech and dynamic.

What To Expect

In this seven-part [Destination Ahead](#) e-book series, we'll guide you through major phases that you can expect of your automation journey.

For those well-experienced with automated solutions, you might read a few sections to refresh your memory.

On the other hand, for those new to or lightly familiar with automation, and especially whole lab workflow automation, we encourage you to take in as much information as possible in every section.

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The Destination Ahead e-book series will cover:

PHASE 1



The Beginning & End

Journey from status quo lab workflows to the land of whole lab automation for opportunity and a competitive edge. Whole lab workflow automation experts like HighRes Biosolutions serve as your North Star and personal escort along the way.

YOU ARE HERE

PHASE 2



Understand Your Situation, Your Goals, and Your Team

Introspection and a first-class crew make short work of pre-journey planning. Gather and organize your thoughts, and the thoughts of others, as you assemble your goal guideposts.

PHASE 3



Dive Deep into the World of Hardware

Hardware Harbor encompasses a large area. Learn helpful tips to traverse through seemingly endless devices and capabilities. Narrow capabilities and features to those best-suited for your budget as well as your current and future needs.

PHASE 4



Immerse Yourself in the World of Software

The Port of Software is an amazing destination along your journey. Gain an overview of data flow and software types and how to orchestrate all through a single, high-functioning information virtuoso. Then determine which platforms stack up to meet your needs.

PHASE 5



Finalize your Proposed Automated Solution Design

Did you chart the right course, or is a major correction in order? Before committing to a final whole lab workflow automation design, review the project overview and details from multiple perspectives.

PHASE 6



Set the Project Build in Motion

It's time to navigate from vision into reality. Get your teams and your site ready with close communication, detailed planning, and rigorous testing.

PHASE 7



Deploy!

Your automation journey isn't finished once the automated solution is in place. Prepare users and your new whole lab workflow automation system with knowledge transfer and system optimization. Put it to the ultimate battery of tests in your environment and with your samples and a host of quality and regulatory guidelines.



Understand Where
You're Coming From

Before exploring the vast world of automation, take a moment to define your unique situation and build a foundation of context.

Start by diving into some questions



What problem or problems are facing your organization?



Why are you unhappy with the status quo?



What are you looking to improve?

Areas to address may range from scientific and technology limitations to business and personnel or safety issues.



Physically map out your existing workflow process(es) including details about how your samples move through your physical space. It's also important to map how people are moving through the space.



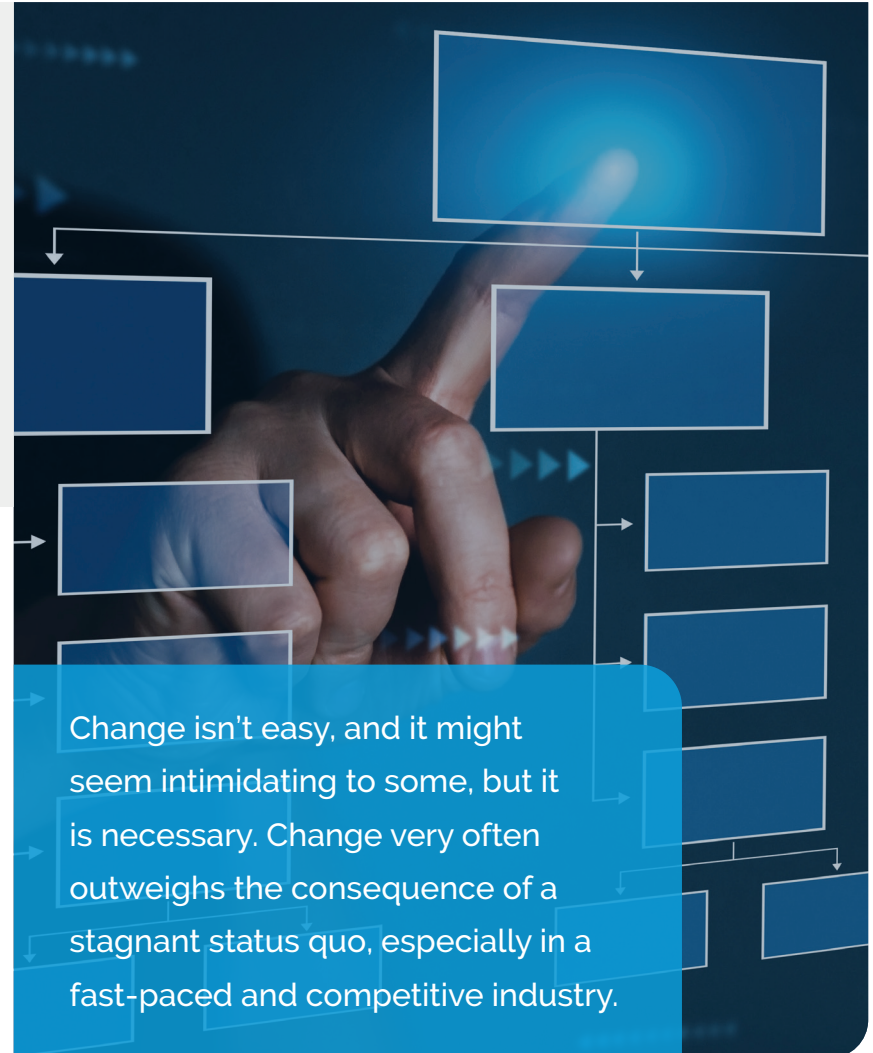
Where are the pain points?



Where are people exerting too much low-value effort?

In addition to documenting these problem areas, it helps to characterize any additional existing circumstances that may cause, contribute to, or otherwise impact the situation. Perhaps there are physical impediments in the floor plan, or you are planning to build a new lab or facility.

Understanding the outcome of sticking with your current situation can also shed light on a problem.





Find Inspiration


The odds are good that others have experienced problems or had similar needs to yours and turned to automation as a solution. Learning about these solutions and user experiences can help to narrow your pathway to automation. Fortunately, many resources are available to aid your education.

Automated device manufacturers, integration specialists, and software providers can provide excellent advice and suggestions based on your circumstances and processes.

Tradeshows and conferences are convenient venues to speak with multiple vendors over a few short days. In addition to learning about hardware and software solutions and participating in live demonstrations, this is a chance for you to learn about the character of each vendor company and their team members.

 Do they clearly answer your questions?

 Do you feel that you could easily build a rapport with them?

 Are they responsive and willing to provide references and educational materials relative to your needs?

 How do they approach collaboration?



Scientific news organizations and trade publications offer insight into the latest trends and innovations as well as helpful articles, reviews, and even tips from hardware and software vendors and users. The same information with even more focus on the user perspective can be gleaned from laboratory automation communities, groups, and networks.

Each resource is likely to have a social media presence, whether through blogs, videos, webinars, or other outlets.

While vendors and news organizations may include a mix of promotional and educational content, other resources may be dedicated to educating viewers, including that of an automated system's performance and potential.

NOTABLE AUTOMATION RESOURCES

Bio-IT World Conference & Expo



CONNECTED



Future Labs LIVE



Future Labs, Automation & Technology



Lab Automators



Lab of the Future



Laboratory Robotics Interest Group (LRIG)



Pistoia Alliance



SLAS Discovery



SLAS International Conference and Exhibition



SLAS Technology



A close-up, profile view of a man with a beard and glasses, looking towards the right. The image is heavily tinted with a blue color. A semi-transparent blue horizontal bar is overlaid on the right side of the image, containing the text.

Look Within

Finally, understand the impact of your facilities space in relation to an automated system or systems. There's no bigger time-wasting headache than to purchase a whole lab automation solution only to discover that your facility cannot support the required lab space, electricity and network requirements, or other criteria.



How much space is available for an automated solution?

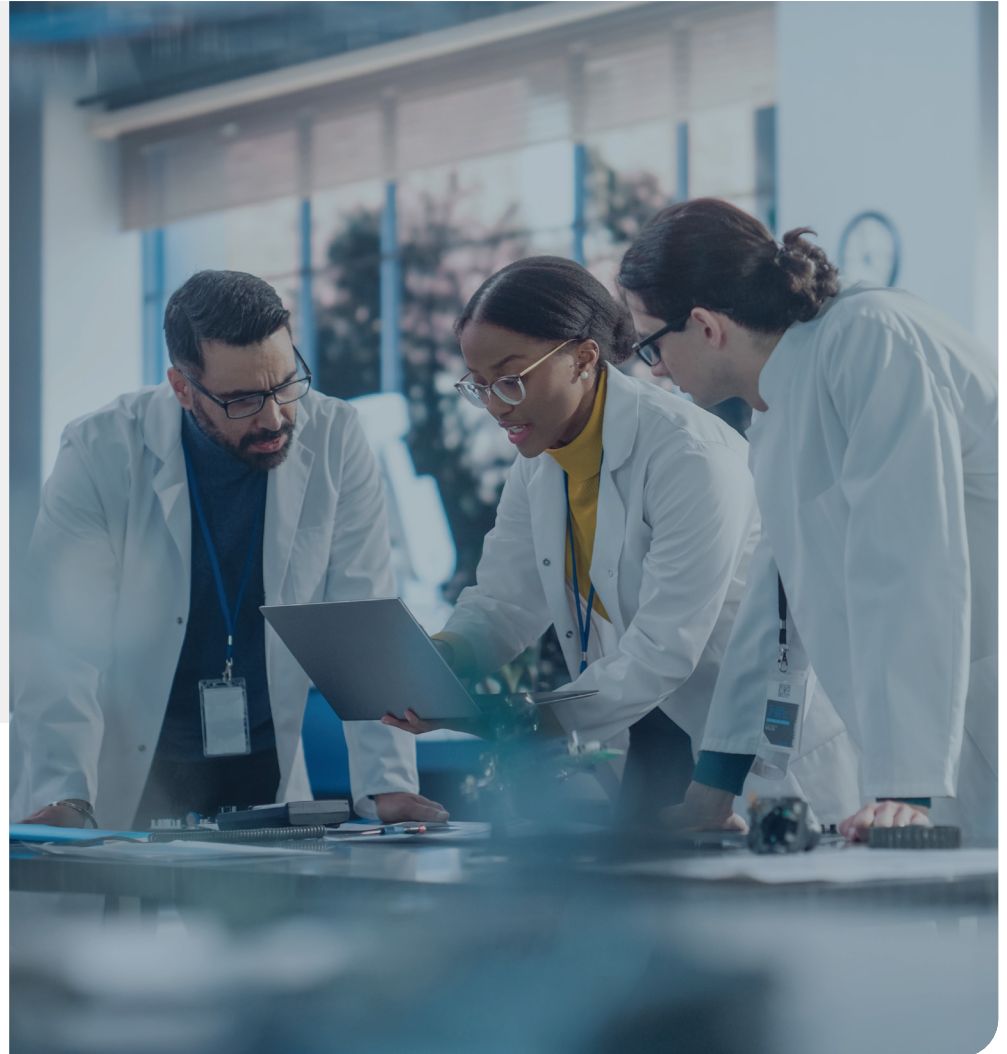
If space is in short supply across your lab, as rings true for most labs, then vertically integrated systems are a valuable floorspace-saving benefit.



Will the component devices meet fire safety and building codes in terms of physical clearance, and will it fit through doorways for installation?

The easiest and most direct path from the receiving dock to the lab may not always be what you expect.

You may not have the answers to physical space questions, but a facilities engineer will. This is just one of many valuable roles that may comprise your internal team, which we will cover shortly in this e-book.



The background features a dynamic, abstract design with numerous thin, curved lines in shades of blue and red, creating a sense of motion and depth. A horizontal white band is positioned across the middle of the image, serving as a backdrop for the text.

Determine Your
Automation Journey Goals

With your own situation documented,
and helpful resources having shed light
on similar situations, now is a good time to
set informed automation project goals.





Setting and Supporting Goals

Goals should be specific to align team members, management, and vendors and to also streamline planning. Goals should also include measurable key performance indicators (KPIs).

KPIs gauge progress along the project journey and quantify goal success as the automation system is fully integrated. Typical KPIs can include quality milestones, quantified time and labor reductions, increased throughput, and a reduction in errors.

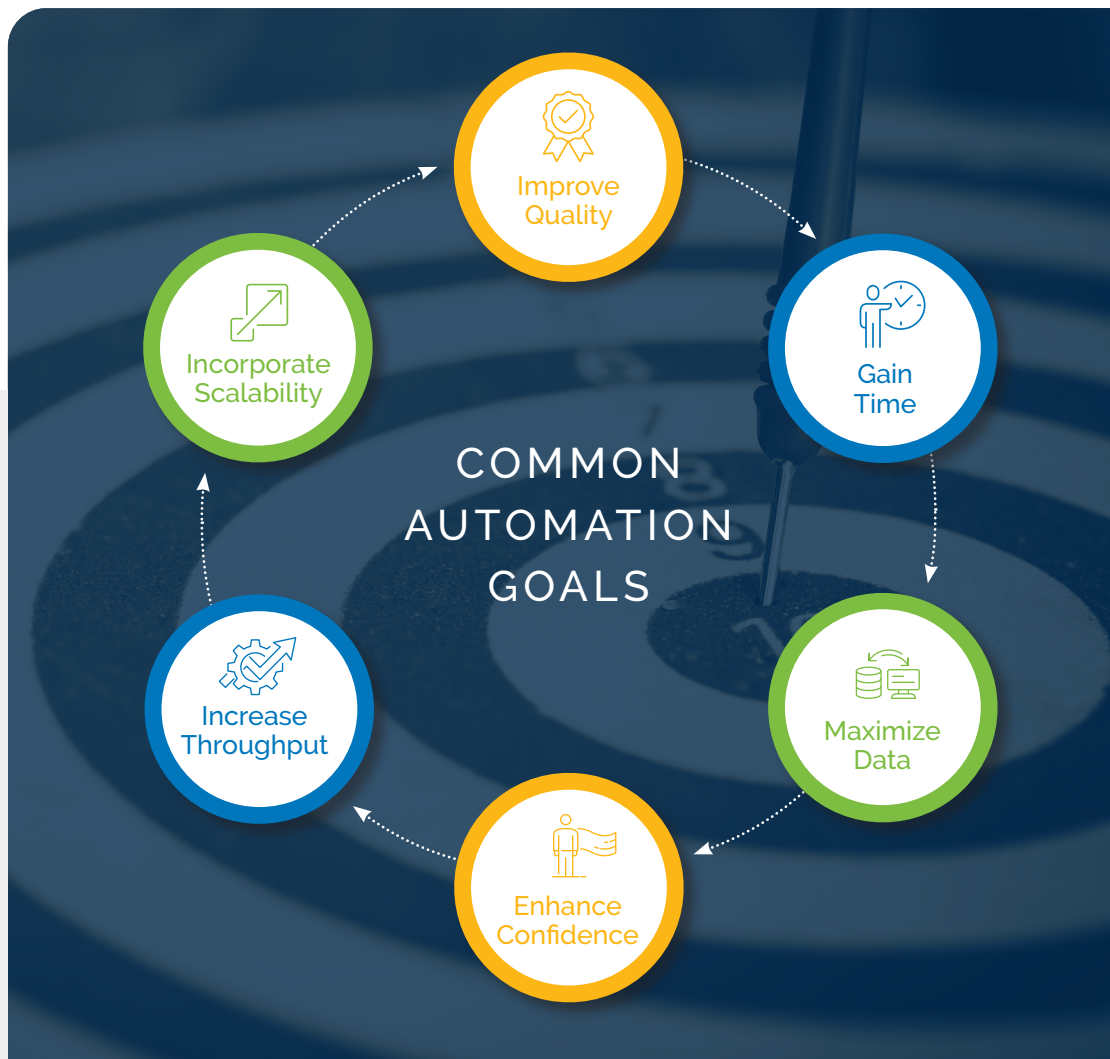
In contrast, a return on investment (ROI) quantifies project success in relation to the overall financial investment. Executive management will be especially interested in the ROI of this capital project.

Develop goals that are reasonably achievable and relevant in context of your organization's objectives and growth. It's also very helpful to anticipate the automation system's ROI potential. Finally, set a realistic timeline to keep the project moving and increase motivation and accountability for all stakeholders.



Do your goals answer why you are looking to change from the status quo?

Perhaps the lab needs to achieve more in less time, or reduce time spent on reworked or failed samples. Perhaps the lab would benefit from enhanced robustness and a deeper understanding of the process results. Or you may want to plan for inevitable future changes like facilities expansions, higher plate densities, workflow additions/changes, or new assays and projects.





Outline Requirements and Budget

Capture all this information in a user requirement specification (URS). This planning document doesn't need to be overly technical or complicated. Instead, it outlines assay requirements, critical parameters, and what you want the solution to accomplish. The URS is valuable to align all stakeholders as the project progresses.

FACILITY ADJUSTMENT FACILITY EXPANSION CONTRACTORS
SOFTWARE GENERAL UTILITIES TRAVEL
STAGING HARDWARE SHIPPING
OUTSOURCED SERVICES INSPECTIONS PROTOCOL SPECIALIST UTILITIES
VALIDATION CONSUMABLES PERMITS
SERVICE CONTRACT CHANGE ORDERS SUBCONTRACTORS TRAINING
MAINTENANCE CONTRACTS TESTING

This is also a good time to estimate your budget. You likely don't have a firm vision of your ideal automated system components yet, but the more expansive the scope—from semi-automated to fully integrated whole lab workflow automation and do-it-yourself to multi-vendor partnerships—the more detail you will have to provide to your executive leadership team when requesting and justifying funds. In addition to hardware and software costs, allow room in your budget for additional expenses such as service contracts, trainings, travel, and other indirect items.

Connect with Us Before you Take the Next Step

Embarking on an automation journey? Depend on HighRes Biosolutions to be a friendly and experienced team member! Our multi-faceted experts are on hand to provide personalized guidance, helpful insights, and actionable tips through each phase of your unique journey.

Before you take that next step into automation, including whole lab workflow automation, reach out to us at sales@highresbio.com.

North American Headquarters

102 Cherry Hill Drive
Beverly, MA 01915 USA
Tele: 781-932-1912

European Headquarters

Unit D2, Broadoak Business Park
Ashburton Road West
Trafford Park, Manchester
M17 1RW UK

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Learn More

We invite you to read the third e-book in this Destination Ahead series, *"Dive Deep into the World of Hardware"*. Here, you will learn how to associate device attributes with your URS and narrow your hardware search.

