Automating Core Facility Charges

Integrating the API to create core requests and ensure reliable revenue capture

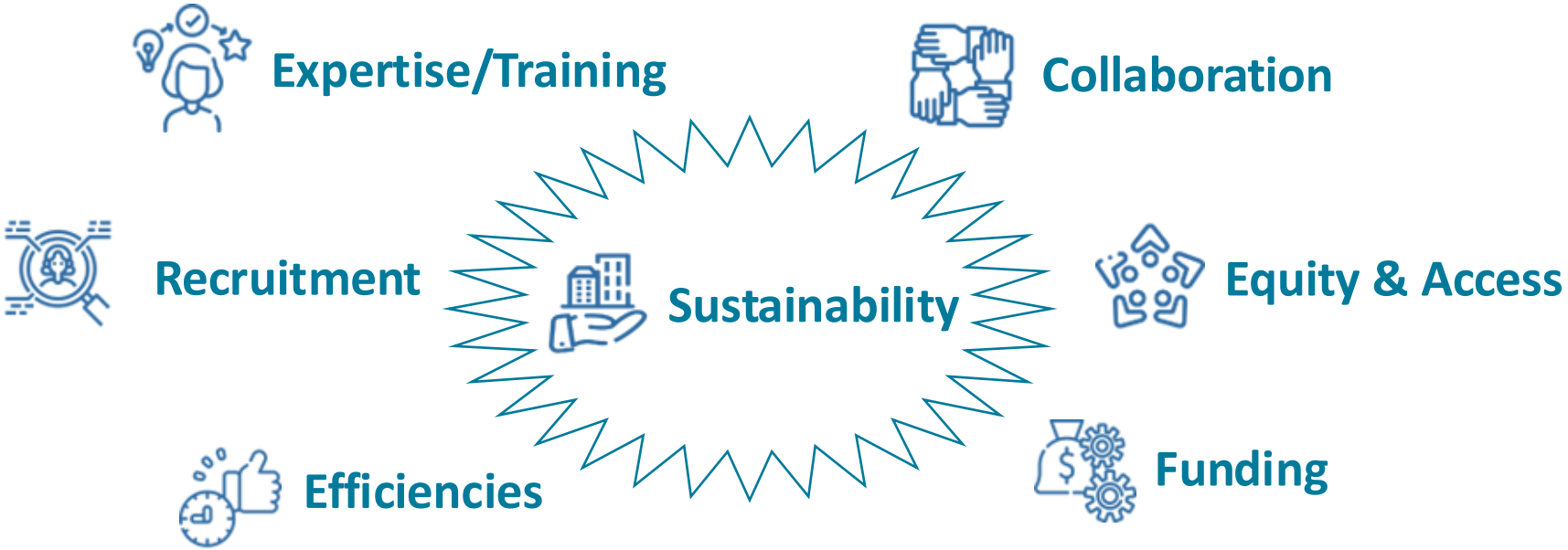
Aaron Larson
Director of Operations, Shared Research Resources

Seattle Children's Research Institute

WACD 2026 – Berkeley, California

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Shared Research Resources



Goal for today's discussion

New sustainability approach

- Hands-off, automated core revenue generation

Core users

- Time savings
  - iLab request creation
  - Email responses
- No monthly tracking
- Easy request navigation

Core management/admin

- Less tracking to ensure entry<>iLab match
- Fewer email follow ups
- Less PI involvement
- Revenue capture
- Audit-ready data

Shared Resources at SCRI



Shared Research Resources (SRR) are institutionally supported core resources and facilities that enable efficient and equitable access to state-of-the-art scientific equipment and expertise to advance collaborative, cutting-edge pediatric research.

- ABSL-3 Core Facility
- Behavioral Phenotyping Core
- Genomics and Spatial Biology CoLab
- Microscopy and Histopathology CoLab
- Flow Cytometry Core
- See all resources available to researchers.

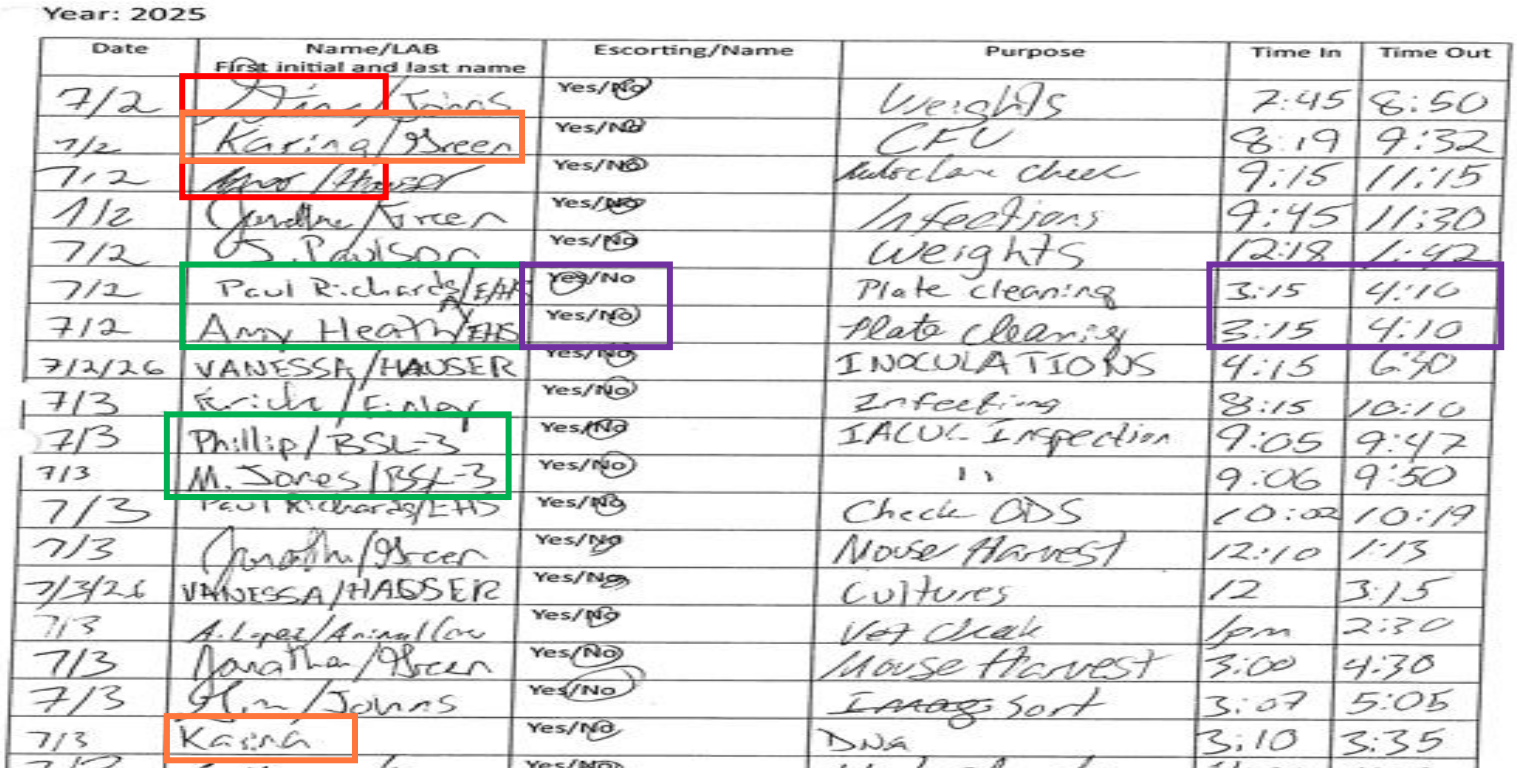
For more information, please contact SRR@seattlechildrens.org.



Provides a secure and highly specialized biosafety environment for researchers working with infectious agents, hazardous biological materials, and other potential biohazards

Note: Users are only charged an entry fee (recovers PPE, operating costs)

Entry fee management



Year: 2025

Date	Name/LAB First initial and last name	Escorting/Name	Purpose	Time In	Time Out
7/2	[illegible]	Yes/No	Weights	7:45	8:50
7/2	Karina/Green	Yes/No	CFU	8:19	9:32
7/2	[illegible]	Yes/No	tuberculin check	9:15	11:15
7/2	[illegible]	Yes/No	Infections	9:45	11:30
7/2	[illegible]	Yes/No	weights	12:18	1:42
7/2	Paul Richards/EHS	Yes/No	Plate cleaning	3:15	4:10
7/2	Amy Heath/EHS	Yes/No	Plate cleaning	3:15	4:10
7/2/26	VANESSA/HAUSER	Yes/No	INOCULATIONS	4:15	6:30
7/3	[illegible]	Yes/No	Infecting	8:15	10:10
7/3	Phillip/BSL-3	Yes/No	IACUC Inspection	9:05	9:47
7/3	M. Jones/BSL-3	Yes/No	"	9:06	9:50
7/3	Paul Richards/EHS	Yes/No	Check ODS	10:02	10:19
7/3	[illegible]	Yes/No	Mouse Harvest	12:10	1:13
7/3/26	VANESSA/HAUSER	Yes/No	Cultures	12	3:15
7/3	A. Lopez/Animal Care	Yes/No	Vet check	1pm	2:30
7/3	[illegible]	Yes/No	Mouse Harvest	3:00	4:30
7/3	[illegible]	Yes/No	[illegible] sort	3:07	5:05
7/3	Karina	Yes/No	DNA	3:10	3:35
		Yes/No			

All of these names/entries are fictional

Risk avoidance

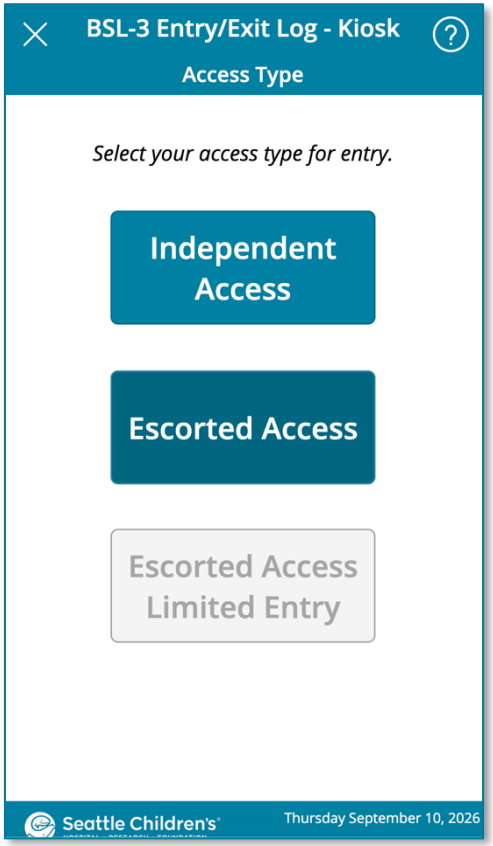


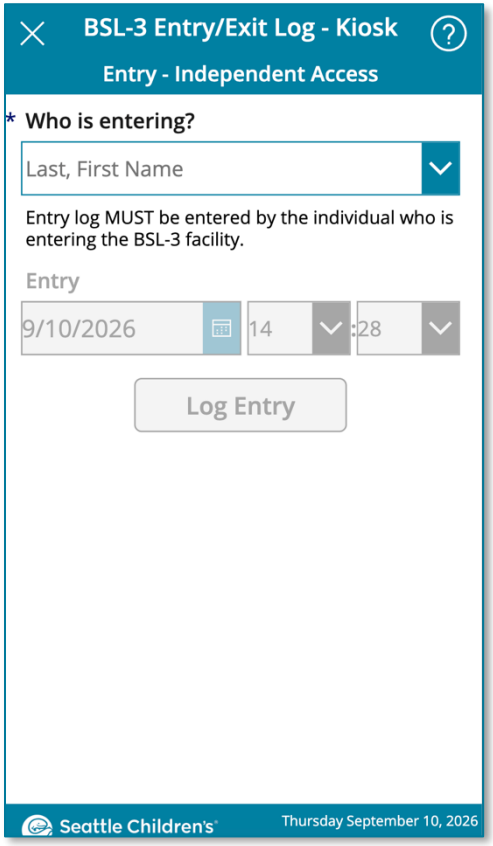
All core facility strengths at risk from compliance threats

All users must be charged

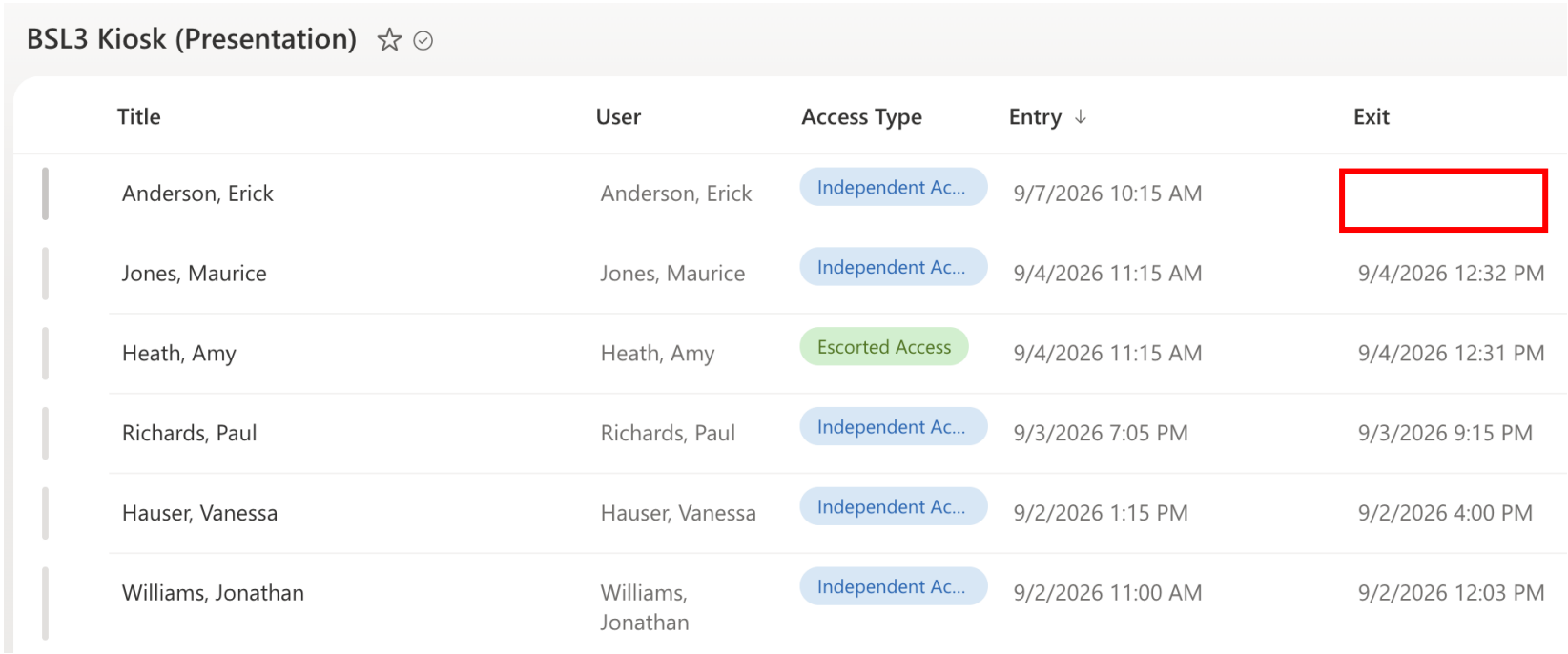
- Consistently
- Reliably
- Equally

Introducing the Kiosk





Introducing the Kiosk – SharePoint list

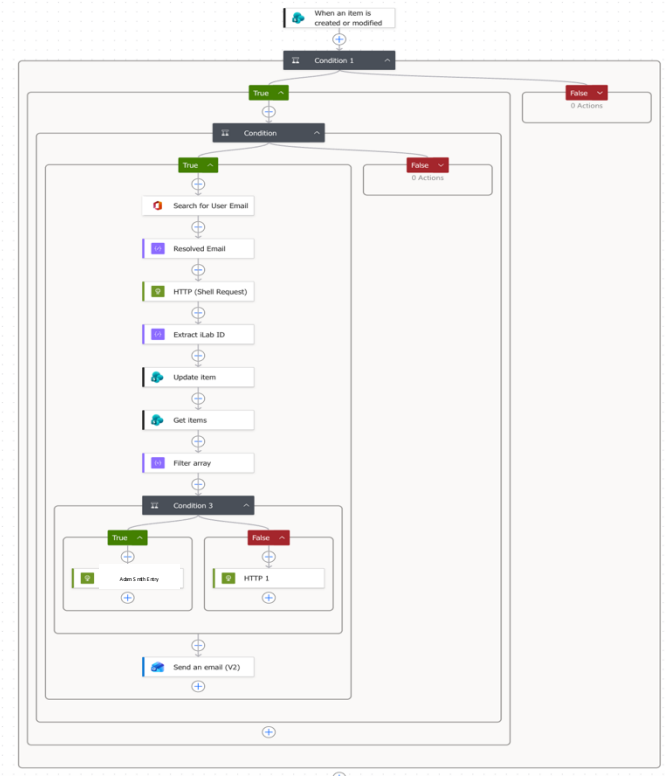


BSL3 Kiosk (Presentation)

Title	User	Access Type	Entry	Exit
Anderson, Erick	Anderson, Erick	Independent Ac...	9/7/2026 10:15 AM	
Jones, Maurice	Jones, Maurice	Independent Ac...	9/4/2026 11:15 AM	9/4/2026 12:32 PM
Heath, Amy	Heath, Amy	Escorted Access	9/4/2026 11:15 AM	9/4/2026 12:31 PM
Richards, Paul	Richards, Paul	Independent Ac...	9/3/2026 7:05 PM	9/3/2026 9:15 PM
Hauser, Vanessa	Hauser, Vanessa	Independent Ac...	9/2/2026 1:15 PM	9/2/2026 4:00 PM
Williams, Jonathan	Williams, Jonathan	Independent Ac...	9/2/2026 11:00 AM	9/2/2026 12:03 PM

All of these names/entries are fictional

Introducing PowerAutomate/API



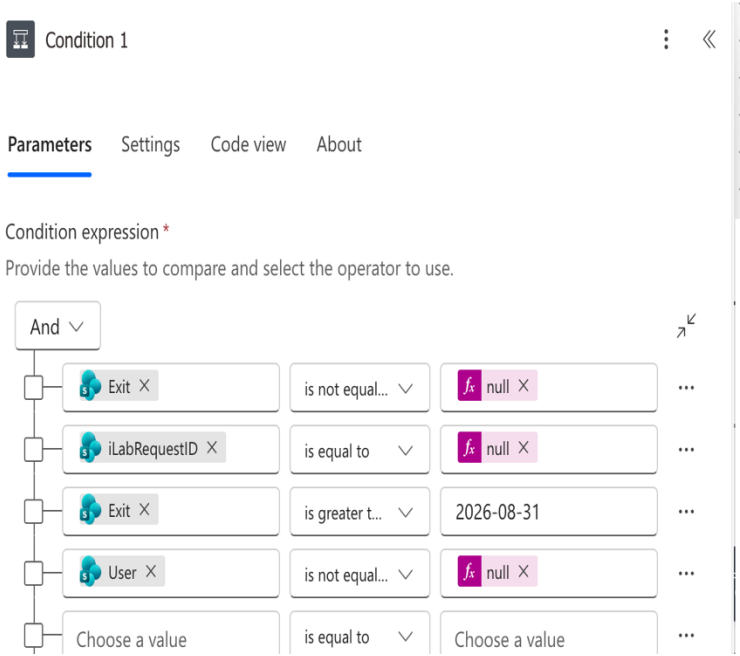
What this is:

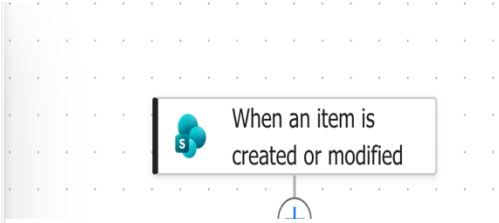
- Trigger based automated workflow
- Series of conditions, filters, “pills”, if/then/else expressions

What this isn’t:

- AI

Trigger from Kiosk exit

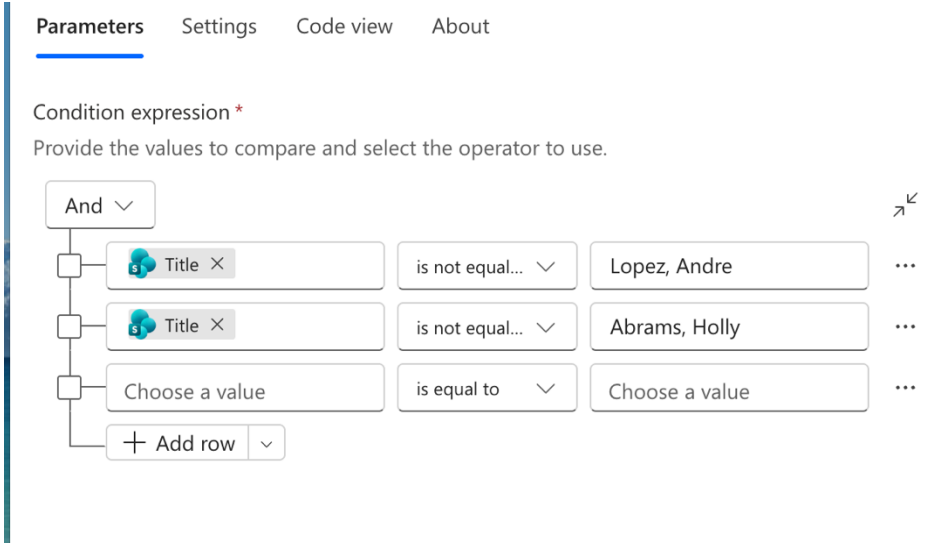


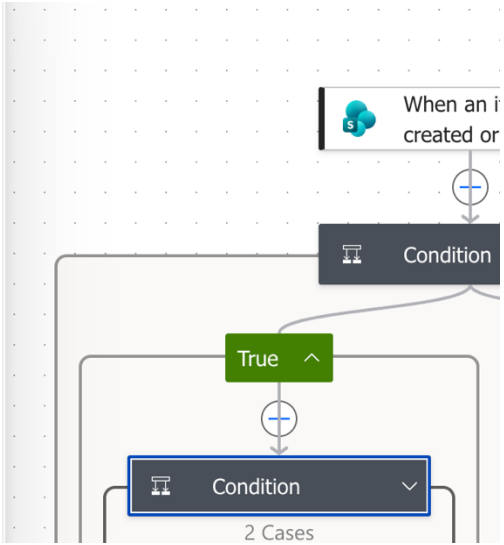


Additional triggers include but not limited to:

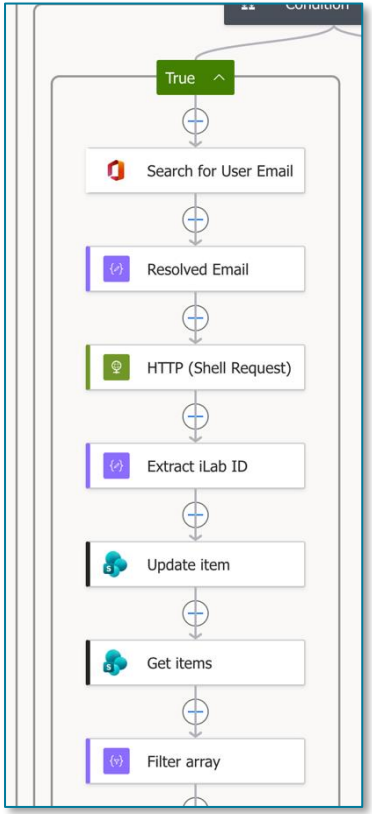
- Outlook emails and events created/received
- OneDrive file creation/modification
- Microsoft Forms survey submission
- Power BI data activity
- GitHub or Jira issue activity
- Manual/Timed trigger
- Many more!

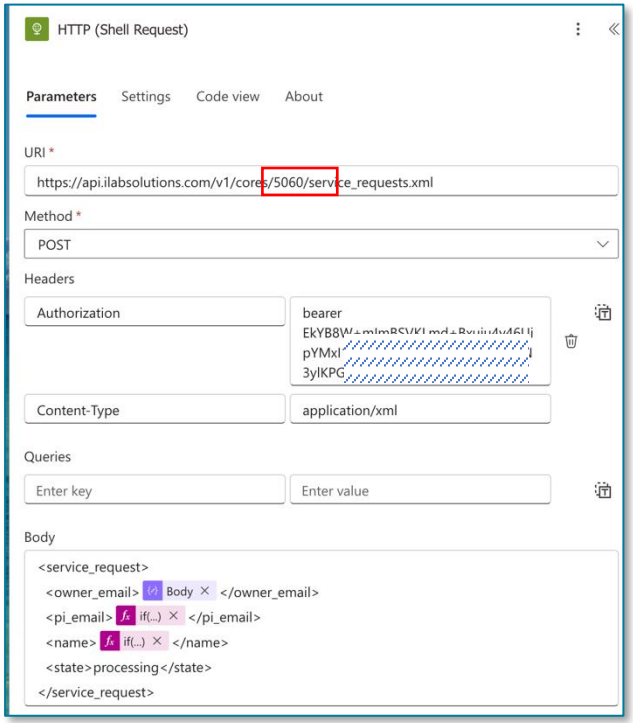
Developing the flow

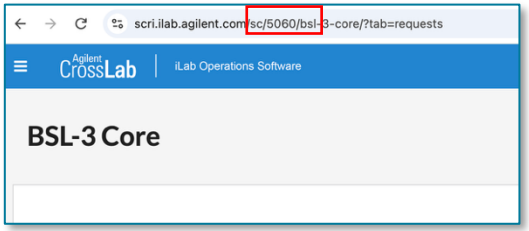




Developing the flow

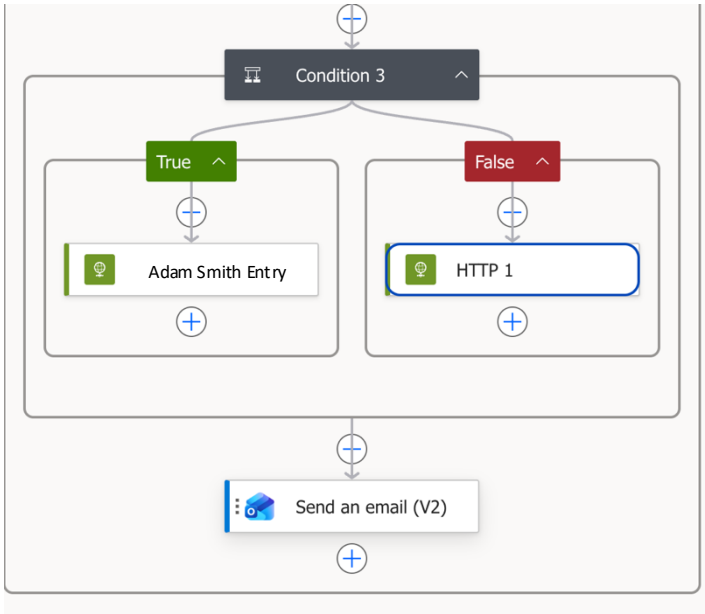


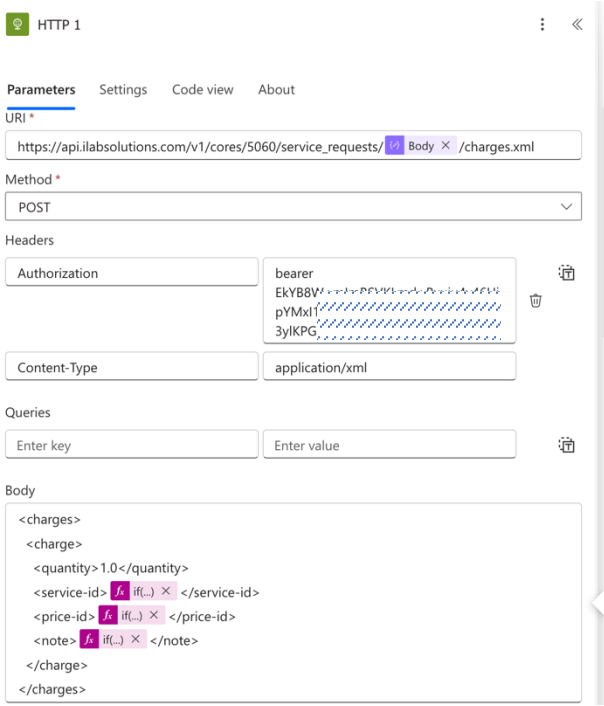




Entry ↓	Exit	iLabRequestID
7/8/2026 12:00 AM	7/8/2026 2:00 PM	BSL-C-AL-011063
7/7/2026 11:00 AM	7/8/2026 12:00 AM	BSL-C-AL-011064
7/6/2026 11:00 AM	7/7/2026 11:00 AM	BSL-C-AL-011065
7/3/2026 12:05 PM	7/4/2026 10:00 AM	BSL-C-AL-011067

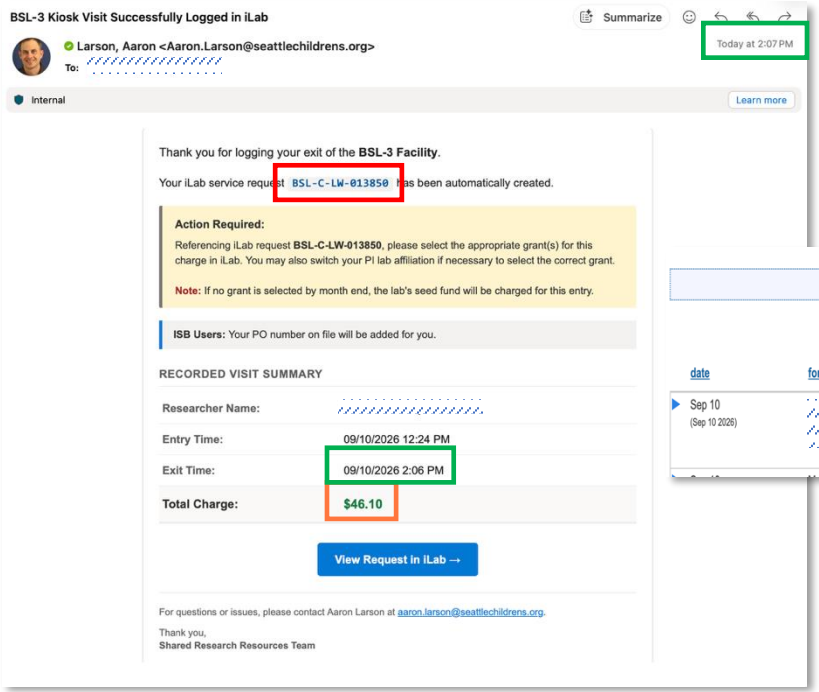
Developing the flow







Automated request created



BSL-3 Kiosk Visit Successfully Logged in iLab

Summarize

Today at 2:07 PM

Larson, Aaron <Aaron.Larson@seattlechildrens.org>

To:

Internal

Learn more

Thank you for logging your exit of the **BSL-3 Facility**.

Your iLab service request BSL-C-LW-013850 has been automatically created.

Action Required:

Referencing iLab request **BSL-C-LW-013850**, please select the appropriate grant(s) for this charge in iLab. You may also switch your PI lab affiliation if necessary to select the correct grant.

Note: If no grant is selected by month end, the lab's seed fund will be charged for this entry.

ISB Users: Your PO number on file will be added for you.

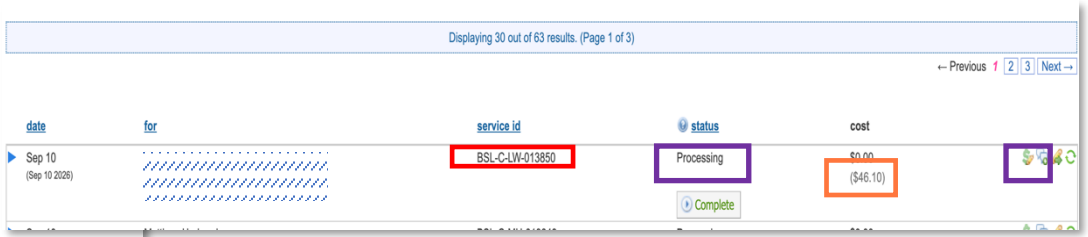
RECORDED VISIT SUMMARY

Researcher Name:	
Entry Time:	09/10/2026 12:24 PM
Exit Time:	09/10/2026 2:06 PM
Total Charge:	$46.10

View Request in iLab →

For questions or issues, please contact Aaron Larson at aaron.larson@seattlechildrens.org.

Thank you,
Shared Research Resources Team



Displaying 30 out of 63 results. (Page 1 of 3)

← Previous 1 2 3 Next →

date	for	service id	status	cost
Sep 10 (Sep 10 2026)		BSL-C-LW-013850	Processing / Complete	$0.00 ($46.10)

Sustainability we've achieved

- Daily user time savings
  - Multiplied by 50+ facility users over the course of a year
- Management time savings
- Equitable application
- Guaranteed 1:1 facility entry and iLab match
  - Costs already incurred upon exit
- Audit proof record of entries
- 24/7 system uptime



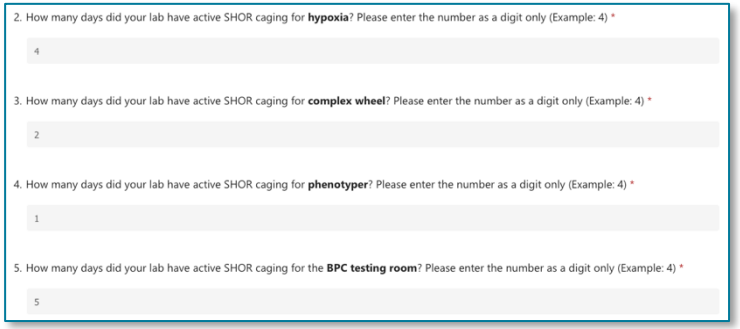
Lessons learned and limitations

- Babysitting: Adaptations are necessary
  - New users needing special conditions
  - Email and preferred name mismatch
  - Lab changes
  - UTC time standard
- Institutional auto-approval limits apply
- Reliance on Kiosk use
- Disconnect from grants
  - User grant selection in iLab needed
    - Need contingency if no grant selected
  - API connects to the core, not to the institute
  - Grant access changes daily

Taking automated requests further

Adapting the flow to other service and trigger types

- Survey submissions
- Pass-through costs for reagents



Scenario 1:

Custom lab services (e.g., adding specific antibodies, reagents, or staining kits during sample processing)

Flow:

Core staff use a low-code Power App on a tablet to scan a barcode or tap a button when using consumables. The flow instantly adds a consumable fee to the corresponding iLab request ID

Scenario 2:

Bioinformatician completes a variant calling pipeline run for a project. Push the final commit or trigger a GitHub action release, triggering the event into Power Automate containing the repository name, commit hash, sample count, CPU/GPU runtime hours, and the associated iLab Service Request ID

Flow:

Based on the pipeline metadata (e.g., 10 samples processed @ $50/sample + 4 hours HPC compute), the flow posts the line-item charge directly into iLab

Equipment use charges

Limitation:
iLab's interactive **Scheduling Module** calendar does not expose direct endpoints for the API

Challenge:
Installing proprietary hardware interlocks or micro-controllers on every individual piece of core equipment can require thousands of dollars in hardware purchases, licensing, and installation fees per instrument

Opportunity:
iLab fundamentally processes equipment usage and completed reservations as **Service Requests** Using Power Automate as a lightweight bridge allows facilities to utilize low-cost or existing door/kiosk access hardware to automatically trigger iLab billing requests

Acknowledgements

Internal Staff:

- Cindy Chang (Kiosk development)
- Keziah Hernandez (BSL-3 core leader)

User Volunteers:

- Molly Kanagy
- Courtney Plumlee
- Thomas Smytheman
- Julie Do