MATFab strategic goals and current progress for FY25

Growth and Development Goals

Goal 1: Shoring up fabrication capabilities to meet the needs of the users.

Strategies	Current Progress
Interface with users to understand the main tools needs and how they are used in the process	Schaffer or Tori have met with several of the fabrication users individually in FY2025. Working with representatives from the group to establish a more formal user group.
Submit proposals to federal agencies and private foundations for acquisition of new equipment	Worked with three faculty partners to support submission of federal grants to support fabrication instrumentation.
Redesign laboratory layout/structure to meet the needs of the instruments and users with best practices	Began design process for 172 and 174 renovations, improved compressed gas storage for the fabrication facility
Determine strategies to improve wet bench processing	Started bid for new wet-bench processing fume hood

Goal 2: Develop a marketing strategy for the MATFab facility

Strategies	Current Progress
Work with OVPR to create marketing material for MATFab facility	Utilizing University of Iowa branding templates to develop marketing material for MATFab facility
Develop LinkedIn profile for MATFab facility for the purpose of corporate and external marketing	
Improve website to include videos and interactive media	
Work with OVPR to utilize digital signage across campus	Created MATFab digital signage and distributed across campus

Goal 3: Create metrics and ways to show value of our facility to the UI research enterprise

Strategies	Current Progress
Identified number of grants that are impacted by MATFab	Created mechanism to show dollars touched for reports with help from Rachel
Work with OVPR to create compelling graphics for number of users and connection to colleges	Graphics that show dollars touched, connections to research enterprise on campus were included in the 2025 Annual Report
Connect with users to highlight cutting edge research done in the facility through MATFab website and UI media	Two researchers (Fatima Toor and Korey Carter) were highlighted at the MATFab Research Frontiers Symposium
Evaluate publications that are impacted by MATFab instrumentation and staff	
Create annual report to distribute to administration	Three page annual report delivered to administrators and users for FY 2025

Goal 4: Create opportunities for undergraduate and graduate students to learn laboratory management and tool maintenance/development

Strategies	Current Progress
Interface with office of undergraduate research to evaluate possibilities of undergraduate intern program with facility and shops	
Evaluate funding opportunities for interns with local industrial partners	
Create strategy to find undergraduate internship opportunities	

User focused Goals

Goal 1: Develop a more engaged scientific community for the users

Strategies	Current Progress
Create a MATFab research event (poster session, speakers)	Held the first MATFab Research Frontiers Symposium in April 2025
Create a wiki site to share resources and ideas	
Create webinar series for companies to help with training and scientific knowledge	Staff held a workshop on SEM at the MATFab Research Frontiers Symposium
Staff attend scientific meetings to engage with larger scientific community and discuss MATFab capabilities	Schaffer and Daniel attended conferences in support of the MATFab Facility.
Organize Core Facility Meeting to further develop UI connections and resources	

Goal 2: Improve website for facility/instrument use and sample preparation

Strategies	Current Progress
Develop webform for sample submission	Sample submission forms were created for ICP and XRD sample submission
Create a tool status update process that is accessible online or provides alerts to users	Tool status is being updated via BookItLab site.
Update fabrication details on the website to improve information	
Create training videos for chemical safety	
Increase information for instrumentation to provide more fundamental and technical details for ease of use	Added details on new SEM capabilities
Develop flow chart for helping people find the best technique in the MATFab facility for their scientific question	Created flow chart for MATFab facility

Goal 3: Intersect with regional partners to increase access to instrumentation and capabilities

Strategies	Current Progress
Work with Iowa State University to create partnerships and reduce barriers to utilize equipment	Established partnership with ISU and UMinnesota to support easier usage of instruments for these facilities.
Develop strategy with NNLA to create more accessibility to fabrication equipment in the Midwest	Annual meeting was not held this year, but continued to interface with NNLA users over email.
Outreach to small colleges and regional institution in region to improve connections to MATFab facility	

Instrument focused Goals	
Goal 1: Increasing the user base by improving sample preparation on high value instrumentation	
Strategies	Current Progress
Create infrastructure to handle sample digestion for ICP analysis	Purchased microwave digester for use with ICP sample preparation.
Develop capabilities to press pellets and create samples for XRF analysis	Purchased pellet press for use with the XRF system.
Develop HF capabilities for use on campus to improve user safety and work with EH&S to advertise on campus	
Goal 2: Develop and distribute standard operating procedures for instrumentation	
Strategies	Current Progress
Categorizing the type of SOP (signage, word document, and videos) needed for each piece of equipment	SOP type identified for each piece of equipment in an excel document
Categorizing how the SOPs will be distributed to the users (laminated document in lab, on website/Bookit/Youtube, on sharepoint)	SOPs distribution identified and categorized in an excel document
Develop in-lab signage for selected instrumentation and post in the relevant labs	Signage posted for selected instruments that users utilize for instrument use.
Create written SOP documents for selected instrumentation and distribute to users	
Create video SOPs and post on selected distribution system	
Integrate SOP into training	
Goal 3: Improve billing and revenue for instrument time	
Strategies	Current Progress
Ensure all instruments are connected to Bookit through computers or relay systems	Establishing in house network summer 2025 and installed web relay for one instrument.
Evaluate capabilities and billing rates, compare to peer institutions, and adjust accordingly	Rates for evaluated and adjustments were made to billing, including: Changing hourly/daily rates for Microprobe for consistency ($40/hr to $50/hr), Increasing SC-XRD to $17 to include annual CCDC charge.
Develop a marketing plan for JEOL electron microprobe, Rigaku XRF, and Raith lithography system to find new users	XRF was reduced from $90 to $15 to increase user base. Raith is still being evaluated for issues with stitch errors

Internal Process Goals

Goal 1: Develop a policy to evaluate instrument charges, lifetime, and replacement

Strategies	Current Progress
Work with OVPR accounting to develop methodology to evaluate instrument charges based upon subvention costs, instrument costs, and peer institution rates	Rachel created worksheet that includes associated costs for each equipment that can be used to evaluate costs.
Determine metrics to evaluate lifetime of an instrument (availability of parts, constant maintenance, ability to service, user base) - Instrument Health Assessment	
Develop metrics to evaluate when instruments should be replaced or sunset	
Create policy documents for changing charge structure and instrument lifetime and replacement	

Goal 2: Develop strategy for internal inventory (parts, tools)

Strategies	Current Progress
Evaluate platform and details needed for an internal inventory	
Determine current inventory of MATFab for parts and tools	
Develop plan to keep inventory current	

Goal 3: Better processing to onboard/tasks undergraduate student interns

Strategies	Current Progress
Assess current needs for onboarding undergraduate student interns	
Develop onboarding and mentoring strategies for undergraduate student interns	
Create online platform for delegating tasks and ensuring completion	
Develop assessment tools to help with managing and reviewing undergraduate student internship performance	