The September 2019 adoption of a new Strategic Framework by the AIP Board of Directors set a new vision for the American Institute of Physics—a vision founded on the principles of AIP being a Federation that advances the success of our 10 Member Societies and an Institute that operates as a center of excellence supporting the physical sciences enterprise.

Our efforts in 2020 focused on setting expectations for the path ahead by executing our Year of Discovery during which the Institute learned how to understand better the transformation project we would face and determine its scope.

While the Year of Discovery study processes facilitated by our consultants focused on delivering vision requirements and a capability model, the AIP team carried out a set of experiments that complemented these studies. Experiments took the form of a set of staff-led activities that supported expected 2020 operational outcomes but with an additional focus affording us the opportunity to probe our readiness to realize our AIP-2025 vision. The experiments were designed to test our organizational capabilities, project planning and tracking, team skill sets, and our capability to deliver the kinds of deliverables we could envision being supportive of the Strategic Framework’s vision for AIP.

The Year of Discovery experiments are laid out in the 2020 Operational Planning Document. That document outlined a set of 2020 Objectives and related 2020 Key Results under each goal of the Strategic Framework. This final quarterly report encapsulates progress made on the Q4 Key Results and summarizes overall progress on the 2020 Objectives, as well as lessons learned from the experiments.

The table below shows progress during Q4 and ultimate success on the staff-led Year of Discovery experiments. A filled color circle (●) indicates that the Key Result for that quarter was met during that quarter; a filled grey circle (●) indicates that progress has been made but the Key Result for that quarter was not met; a half-filled circle (●) indicates that the Key Result for that quarter has not been met because of unforeseen circumstances (ACP closure, Board actions, or deferral to future incorporation into our Project Charters). A tick (✔️) in the SUCC box indicates success in delivery on the experiment.
LESSONS LEARNED FROM STAFF-LED YEAR OF DISCOVERY EXPERIMENTS:

Overall, these experiments were a success from the perspective of providing lessons learned on AIP’s staff and institutional capabilities. We learned that significant progress is required to build the capabilities needed for success on the Strategic Framework. 2020 was clearly a challenging year due to the global pandemic and resultant migration to remote work, with concomitant retooling of operations and management. Nevertheless, AIP staff continued to perform well in delivering on their roles while many participated in additional strategic planning activities. However, these experiments showed that while AIP staff are resilient, there is a general lack of agility in taking on new roles while delivering on pre-existing programs and functions.

Organizational Capabilities

When the experiments were originally designed with quarterly Key Results, the global pandemic had yet to impact the United States and AIP was just beginning on the parallel consultant-led activities in identifying “vision requirements” and ultimately the capabilities needed for success of the Strategic Framework by 2025. Through the year, it became clear that Key Results for several of our experiments would not be met while the ACP building was closed. Also, once our transformation roadmap was developed, a number of the experiments were subsumed into capability development activities that will take place in the coming years. Several Key Results therefore became obsolete. More agility in adjusting Key Results and time frames for delivery might have increased engagement and resulted in greater productivity. For example, when Key Results were subsumed by future AIP activities such as the project charters, it might have been useful to recraft those Key Results as preparatory exercises for the future charter.

There seems to have been no clear sense of prioritization of activities amongst the leads for the objectives. All of the leads had operational roles in the management of their program teams, which were impacted by the pandemic. In addition, the consultant-led activities in developing tactics and capability models demanded a significant effort on the part of senior staff. In this environment, the objective experiments seem to have frequently been assigned a lower priority.

Team Skills

Although the experiments were assigned to one or more leads, most would have been more effectively addressed by small teams under the leadership of the lead for the objective experiment. While objective leads did work to varying degrees with their direct reports on the experiment deliverables, there seems to have been little ownership of these activities by staff deeper in the organization, even when the experiments clearly fell within their purview. This issue highlights the need to rebuild AIP’s culture around greater accountability and enhanced flexibility where cross-functional teams can be established to address institutional objectives.
**Envisioned Deliverables**

There was a lack of prioritization of the operational planning experiments relative to other activities, including the consultant-led “vision requirements”, that often resulted in delaying activity until it was too late to fully deliver on the KEY RESULTS on the prescribed timelines.

For several of the objectives, it became clear that some coordination across the AIP family (AIP, AIPP, AIPF) and MS was desirable in terms of interdependencies and shared requirements. Prioritization of the engagement with such external stakeholders was not identified sufficiently early and the necessary level of effort was not applied to coordinate effectively.

A number of the objectives required research activities to assess past reviews and prior AIP programs and procedures. Accessing and locating past records turned out to be a major challenge in some cases, highlighting the need for better records management and data archiving and management, as well as improved documentation and ease of access.

While AIP’s past provides useful context for how we got to this point, it has limited utility in defining how we move forward. How we leverage staff and volunteers to deliver on our vision for the future must be re-envisioned if we are to be successful.

**Recommendation**

Through this exercise and by means of the AIP Year of Discovery it is clear that AIP needs to elevate the Institute’s project management capability. Elevating this capability will allow for AIP’s better:

- Defining a project’s scope, timeline, and milestones;
- Identifying key stakeholders;
- Allowing agility to account for a changing project environment;
- Defining team members’ roles and responsibilities (including migrating responsibility), and holding them accountable;
- Documenting more clearly progress against established milestones and intermediate steps; and
- Planning for training for both managers and functional leads.
FEDERATION GOAL

*AIP will be a vibrant federation that advances the success of our Member Societies.*

**F.1 Member Engagement:**
Build out the research capacity with the Office of Member Society Engagement.

**Q4 Key Result:**
Adopt a 2021 plan for implementing a new membership research function.

**Q4 Report Summary:**
**KEY RESULT NOT ACHIEVED.** Key Result will be addressed in Project Charter on Stakeholder Relationship Management.

**Objective Outcome:**
**Incomplete** - Project did not implement a new MS research capacity or identify specific capability improvements for research into Member Society activities and programs. Plans to hire additional staff resources for this project were put on hold for strategic discovery. Objective will be addressed further as part of Project Charter on Stakeholder Relationship Management.

**F.2 Convening Capacity:**
By means of the ongoing Publishing Dialog, test convening capacity of the Institute to deliver value to the Member Societies.

**Q4 Key Result:**
Member Societies and Affiliated Societies agree to continue dialog and address a second focus area.

**Q4 Report Summary:**
**KEY RESULT NOT ACHIEVED.** Focus was changed to delve more deeply into the Publishing Dialog’s first focus area of coordinated messaging instead of addressing a second focus area. Engagement of the librarian community will continue into 2021.

**Objective Outcome:**
**Completed Successfully** – The Publishing Dialog activities were well received by the Member Society participants. However, these activities highlighted deficiencies in our ability to establish and sustain a Member Society dialog on an issue of broad importance. In particular, insufficient staffing and resources were identified as problems, as well as the need for better front-end planning in gaining consensus from participating societies to use the deliverables in a consistent way.

**F.3 Expert Report Follow-Up:**
By means of TEAM-UP report follow-up, explore methodologies for coordinating and catalyzing MS responses to AIP Expert Reports.

**Q4 Key Result:**
Convene second workshop which delivers proposed action consensus plan for 2021 implementation by the assembled stakeholders.

Analyze and report on AIP’s test of its capacity for transitioning an expert report into Federation/Institute action, identifying an action plan for improvements to be implemented in 2021.
FEDERATION GOAL

AIP will be a vibrant federation that advances the success of our Member Societies.

Q4 Report Summary:

KEY RESULT NOT ACHIEVED. The first TEAM-UP implementation workshop is scheduled for January 28-29, 2021. A Member Society task force is looking at the feasibility for establishing a $50M endowment to support Black students and diversity programs. The second workshop is planned for early summer 2021. Subsequent analysis of AIP capacity for transforming an expert report into action will follow.

Objective Outcome:

Incomplete – The approach to identifying key participants for the organizing committee was rather ad-hoc, which slowed initial progress. There was clear interest from the Member Societies in participating in the planning committee. Once the committee was set, the team was very engaged and creative in defining the optimal agenda for the virtual meeting and adjusting when the interest from the departments exceeded all expectations. Progress was communicated to the foundation sponsor, who remained engaged. A lessons-learned activity planned for after the workshops will provide further assessment of methodologies in delivering on the expectations of the activity.

F.4 Membership Class Review:

Develop a new structure for AIP membership classes that delivers distinguishable levels of value to society and corporate stakeholders.

Q4 Key Result:

n/a

Q4 Report Summary:

The Key Result is now tied to presentation to the BOD of management plans for re-envisioned Affiliated Societies and Corporate Associates programs in the Summer of 2021. Management re-envisioning of AIP Membership continued through Q4 and into 2021.

Objective Outcome:

Incomplete - This Objective was swept into a broader review of membership by AIP Management and the Board of Directors. Early progress in delivering clarity on the current status of the Corporate Associates and Affiliated Societies and recommendations on next steps resulted in strategic input from the Board with requests for further research and analysis by AIP Management and delivery of recommendations in Summer 2021.
I.1 Engaging Research Partners:
By means of testing an exemplar SRC Data Tool, test potential to allow external researchers to access and conduct analysis on SRC data sets.

Q4 Key Result:
Evaluate successes and document obstacles to implementation on other SRC data sets.

Q4 Report Summary:
KEY RESULT NOT ACHIEVED. The project partners met on December 8 for an overview of the interface. The project partners are just beginning to use the tool, so we are not able to evaluate its success yet.

Objective Outcome:
Incomplete – We learned how to navigate the contractual challenges in dealing with international entities and how to work with AIPP and the software vendor to install the platform on our server. The tool has been completely tested and was delivered to the project partners (various international unions) for evaluation. A final assessment of the utility for external researchers awaits the results of testing by the partners.

I.2 History Observatory:
Explore AIP’s capacity to scope out a development plan for the History Observatory that identifies key stakeholders and potential pilot programs.

Q4 Key Result:
Deliver a recommendation on whether the Observatory is feasible for AIP.

Q4 Report Summary:
KEY RESULT NOT ACHIEVED. The Task Force met on December 10 and began to define the boundary conditions and criteria for site selection. Before the January meeting, task force members have been tasked with each preparing a list of potential sites with advantages and disadvantages of each site.

Objective Outcome:
Incomplete – The lack of progress in reaching a recommendation on feasibility for the History Observatory concept reflected inadequate prioritization and lack of agility in working through the challenges posed in building a committee of academics during a pandemic. This deficiency highlights the problem with a staff member having sole ownership of the project, when a small team, duly tasked, would have allowed more timely progress.

I.3 Partnership Mapping:
Build a map of potential private foundation and government agency partners who share elements of AIP’s mission and priorities.

Q4 Key Result:
n/a
Q4 Report Summary:
n/a

Objective Outcome:
Successfully Completed – The experiment successfully delivered a list of foundation and government agency prospects with analysis on how prospect interests align with AIP’s mission and priorities. A plan was submitted for engaging and managing potential prospects.

I.4 Advisory Infrastructure Audit:
Develop a new model for engaging MS subject matter experts and other experts from the broader community to ensure AIP has access to external perspectives and advice as we develop and execute our strategies and priorities.

Q4 Key Result:
n/a

Q4 Report Summary:
While there was no Key Result in Q4, the Key Result for Q2 remains incomplete. A white paper on re-envisioning membership included a section on Liaison Committees as a key component of the Federation Office. Rethinking the Advisory Committees has been delayed until later in 2021.

Objective Outcome:
Incomplete - The review of AIP Liaison and Advisory Committees continued through 2020 but became part of the more encompassing pursuit of the Federation and Institute goals and their impact on AIP’s organizational construct.
AIP will be a trusted and reliable source of information and analysis.

R.1 Brand Assessment:
Measure perceptions of AIP’s brand and build a Brand Strategy to support the application of the Strategic Framework.

Q4 Key Result:
Deliver findings and recommendations to management along with an implementation plan for 2021.

Q4 Report Summary:
KEY RESULT NOT ACHIEVED. Two creative routes have been presented by the contractors; feedback will be integrated and the final creative route will be delivered by the end of January 2021.

Objective Outcome:
Incomplete - This activity has moved forward steadily through 2020 with identification of a contractor, and periodic reports of progress. The timelines for the delivery of a branding strategy have been largely defined by contractor performance and iteration of interim products with AIP Management. Final delivery has been delayed but it is important to get the branding strategy right.

R.2 Storytelling:
Build the foundation of a renewed storytelling capability within the Institute to support AIP’s goals to be a trusted source as well as support broader communications goals.

Q4 Key Result:
Deliver an analysis of the tested approach to storytelling as a pathway to building AIP’s reputation as a reliable and trusted source of information.

Q4 Report Summary:
KEY RESULT NOT ACHIEVED. RFPs have been returned and final selection of the contractor is in process.

Objective Outcome:
Incomplete - This project has languished in part due to competing priorities. Development of the RFP and subsequent review of proposals is complete but official approval of the recommended contractor has yet to be formally requested.

R.3 Audience Assessment:
Review audience and MS surveys from 2015-2019 to build a baseline understanding of the depth of our capacity to understand audience needs.

Q4 Key Result:
Deliver an action plan for cultivating the audience experience.

Q4 Report Summary:
KEY RESULT NOT ACHIEVED. Key Result will be addressed in Project Charter on Stakeholder Relationship Management.
REPUTATION GOAL

AIP will be a trusted and reliable source of information and analysis.

**Objective Outcome:**

**Incomplete** - Preliminary work on this project included collection and analysis of archived surveys and documents relating to audience engagement. While needs for further data collection efforts were identified, progress was delayed until future implementation of the project charter on Stakeholder Relationship Management.

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**R.4 Government Relations:**

Develop a better understanding of our reputation in GR and advocacy, to inform a GR/advocacy strategy and approach.

**Q4 Key Result:**

Deliver a management-authored paper on future GR strategy, including operational implications, based on assessment.

**Q4 Report Summary:**

**KEY RESULT ACHIEVED.** A white paper AIP Government Relations 2021 and Beyond was submitted over the holiday break in 2020.

**Objective Outcome:**

**Successfully Completed** - The assessment of AIP’s reputation in the area of Government Relations / Advocacy included interviews with key stakeholders, including GR leads in Member Societies and membership / leadership of AIP’s PPLC and PPAC. These engagements provided input on possible future direction for AIP’s Government Relations program. Documentation and recommendations based on this review formed the basis of a Management White Paper.
EXCELLENCE GOAL

AIP will be recognized for cultivating an effective, talented, diverse, and engaged staff that delivers excellence to our stakeholders.

E.1 Staff Engagement:
Develop a new model to extend engagement and improve communication with AIP’s team members.

Q4 Key Result:
Launch staff communications plan on new engagement approach for deployment in 2021.

Q3 Report Summary:
KEY RESULT NOT ACHIEVED. Key Result will be addressed in Project Charter on People and Culture. Work continued during Q4 and beyond on investigating various approaches to staff communications for incorporation into the Project Charter.

Objective Outcome:
Incomplete - This project did not progress beyond identification of possible consultants to assist AIP HR. While clearly important for AIP, development of a new model of staff engagement was delayed until the definition of a project charter on People and Culture under the Strategic Framework.

E.2 Test Cases:
By means of a set of “test cases” explore AIP’s processes to manage and review a set of strategically and tactically focused projects.

Q4 Key Result:
Deliver an evaluation of the process for proposing and evaluating Test Cases, including identifying process improvements and continuous Text Case review feedback.
Deliver a recommendation on how AIP might best oversee future test and pilot projects.

Q4 Report Summary:
KEY RESULTS ACHIEVED. Success under this objective requires an analysis of the performance of all other objectives, which is the purpose of this document, which also includes several recommendations on future strategies for test and pilot projects.

Objective Outcome:
Successfully Completed - As noted under Lessons Learned from these experiments, the project was a success in that we learned that, in general, we have gaps in our capabilities that resulted in less than stellar performance on many of the objectives. Fortunately, the project charters, notably the Project Management charter specifically addresses a number of these deficiencies.

E.3 Process Excellence and Resilience:
Complete the development of new tools to improve the management, maintenance, and resilience of AIP business processes—including a new AIP Intranet capability.
Q4 Key Result:
Identify business processes institute-wide and deliver a plan on applying the new tools to improve, clarify and communicate to staff on processes across AIP.

Q3 Report Summary:
KEY RESULT NOT ACHIEVED. Did not make any progress but did identify that there is a need to improve our virtual technology and communication - learned from staff and that this needs to be a focused “project” and needs a team effort to be successful. Hope to move this forward next year under the Organizational Excellence goal.

Objective Outcome:
Incomplete - Significant progress was made in building out of the new intranet site and in identification and implementation of new tools to assist in our business processes. The scope of this work was very large and was complicated with the transition to remote work due to the pandemic. Nonetheless, it has helped set the stage for the Technology Assessment currently underway by a consultant.

E.4 ACP Convening Capacity:
In cooperation with ACP tenants, develop a plan for providing AIP, APS and AAPT with a flexible, modern, and effective convening infrastructure.

Q4 Key Result:
Select options and deliver a plan for 2021 implementation.

Q4 Report Summary:
KEY RESULT NOT ACHIEVED. Key Result deferred. All improvements to the convening and meeting facilities at ACP have been deferred owing to the pandemic and to allow for time to assess the impact of the remote work status for staff and the future of meeting needs.

Objective Outcome:
Incomplete - The transition to remote work and closure of ACP meant that there would be no convening activities in the building until after the pandemic has passed. As activities in the building are minimized, it is deemed best to delay bringing in consultants and contractors until the building is reopened, and the ACP tenants have a more robust understanding of post-pandemic convening needs.