This report is intended for the information and use of the Arizona Board of Regents, NAU administration, the Arizona Office of the Auditor General, and federal awarding agencies and sub-recipients.
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Northern Arizona University
Export Control Compliance
Internal Audit Report
June 15, 2020

Summary
Audit of Export Control Compliance was approved in the Fiscal Year 2019 Internal Audit Plan by the Audit Committee of the Arizona Board of Regents. This audit supports Northern Arizona University’s (NAU / University) strategic goal of Stewardship and Research & Discovery by ensuring NAU uses federal resources and conducts other scholarship, research, and more generally all relevant activities in accordance with applicable federal Export Control regulations to ensure the continued availability of federal funding to support various NAU initiatives, including research.

Background: Export Controls are federal regulations designed to regulate the distribution of information, items, technology, and services, including such as may be used in research, for reasons related to U.S. foreign policy and national security. These regulations are administered by three federal agencies:

- Department of Commerce, Bureau of Industry and Security: Export Administration Regulations (EAR)
- Department of State: International Traffic in Arms Regulations (ITAR)
- Treasury Department: Office of Foreign Assets Control (OFAC) and the Federal Acquisition Regulation Final Rule on Employment Eligibility Verification

Each agency maintains lists of countries, individuals and entities in the U.S. and abroad that are restricted parties for which foreign business or financial dealings are prohibited without a license or other authorization. While these agencies establish the regulations, Export Control compliance may be enforced by several federal agencies including, but not limited to, the Federal Bureau of Investigation; Immigration & Customs Enforcement; Department of Commerce; Alcohol, Tobacco & Firearms; United States Secret Service; Customs & Border Protection; Drug Enforcement Agency; Air Force Office of Special Investigations; Defense Criminal Investigative Services; Naval Criminal Investigative Services; Intelligence Agencies (CIA, DIA, NSA, etc.); Army Criminal Investigation Command; and others. Violations of the regulations are subject to fines and penalties that can include civil or criminal charges against individual employees and / or the University (See Exhibit A for more details on Export Control regulations).

The Export Control regulations are complex without clear guidance on implementation mechanisms and there are many areas of research for which export control concerns may not be evident at the time of award of a sponsored project or at other points in time for unsponsored work or activities, making it sometimes difficult to identify a research project as being subject to the regulations. Traditionally, the majority of higher education research, including the majority of NAU research, has not been subject to Export Control scrutiny by the Federal Government because of the Fundamental Research Exclusion. Fundamental Research, as defined in the Export Control Regulations, includes basic or applied research in science and / or engineering at an accredited U.S. institution of higher learning where the resulting information is ordinarily published and shared broadly in the global scientific community. University research will not qualify as fundamental research if:

(1) The institution accepts any restrictions on the publication of the information resulting from the research other than limited prepublication reviews by research sponsors, to prevent inadvertent divulging of proprietary information or to ensure that publication will not compromise patent rights of the sponsor; or

(2) The research is federally funded and specific access or dissemination controls regarding the resulting information have been accepted by the university or the researcher.
While Export Control risk is evident relative to research activity, which was the original focus of this audit, Export Control risk is equally notable, and compliance challenging, across the University due to the focus on international collaboration, growing enrollment from any and all prospective student sources, and the decentralized nature of operations in general. Export Control compliance is thereby a University-wide matter, with related regulations potentially impacting many functions, including but not limited to Academic Affairs / Provost, the Center for International Education, Enrollment Management, Facilities, Graduate Studies, Human Resources, Information Technology Services, and Research.

As reported by the National Science Foundation (NSF), NAU is now among the top 200 (# 196) research universities in the U.S. and NAU nearly doubled its research-related spending\(^1\), from $31.6 million in fiscal year 2014 to $58.9 million in fiscal year 2019, based on NSF Higher Education and Research Development (HERD) reporting for those years. During that same time period and relative to the expenditure growth, the number of active sponsored research projects managed by NAU grew from approximately 358 in 2014 to 507 in 2019. As of January 31, 2020, there were only four export control related research sponsored projects (0.08% of the 507 sponsored projects); however, although relatively few sponsored awards currently require extensive Export Control compliance, several of those are large dollar awards requiring notable focus on Export Control compliance. Also, there are more than ten times that number of projects reviewed annually for potential export control impact, although most are deemed to fall under applicable exclusions like the Fundamental Research Exclusion.

Oversight of Export Control compliance for sponsored projects at NAU falls under the Office of Research Compliance (ORC) reporting up through the Vice President for Research. An Export Controls website and Guide to Export Compliance exist to aid in ensuring processes effectively address the federal regulations regarding export controls noted above. Relative to Export Control, the ORC is a one-person function consisting of the Assistant Vice President (AVP) for Research Compliance, who serves as the central resource at NAU for awareness, training, and compliance for export control compliance, with available support from an external consultant for advice on interpretation and implementation. The AVP for Research Compliance serves as NAU’s official Export Control Administrator, a position required by the Export Control regulations. ORC has regular outreach to researchers, especially researchers in areas that may be subject to export control. The Research Division’s Office of Sponsored Projects (OSP) also provides oversight by flagging potential Export Control compliance concerns during the research proposal submission or pre-award process.

**Audit Objective:** Determine if NAU export control policies and procedures are in place to monitor transactions subject to the federal export control regulations, and ensure:

- Research subject to Export Control guidelines (in sponsored contracts or grants) is identified and monitored for compliance;
- Researchers are aware of Export Control regulations and policies regarding shipments to foreign countries, travel abroad and collaboration with foreign nationals;
- University staff and faculty are aware of restrictions on dealing with sanctioned countries, organizations and individuals; and,
- A process exists to report Export Control concerns, issues or violations.

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\(^1\) This doubling of research-related spending is also evident relative to NAU’s audited Combined Annual Financial Reports (CAFR), which reflect an increase from ~$23.6 million in fiscal year 2014 to ~$46.1 in fiscal year 2019, based on the “Operating Expense by Functional Classification” section of the CAFR.
Scope: The scope included a review of currently identified Export Control related research and all active sponsored research projects as of December 31, 2019. As we have no formal Export Control expertise among the Internal Audit Team, we limited our scope as follows:

- We focused on the apparent export control risk currently evident at NAU relative to the nature of policies, procedures and practices in place to attempt to address that risk.
- Unless the sponsored research projects we analyzed included indications that it was specifically subject to Export Control regulations, we reviewed sampled research with NAU’s Export Control Administrator and relied on his expertise in assessing the need for the application of compliance oversight.

Methodology: The following procedures were performed to accomplish the audit objective:

- Reviewed Export Control regulations as publicized by EAR, ITAR and OFAC.
- Reviewed and analyzed all existing NAU policy, procedure and process related to Export Control compliance, including those of departments and functions external to Research.
- Reviewed documentation, guidance and tools developed by the Association for University Export Control Officers (AUECO).
- Validated the controls implemented over formally identified NAU Export Control research.
- Completed various analytics of all open NAU research projects to determine the likelihood of research subject to Export Control regulations not being identified as such.

The audit was conducted in accordance with the *International Standards for the Professional Practice of Internal Auditing* promulgated by the Institute of Internal Auditors and accordingly, included such tests considered necessary under the circumstances.

Conclusion: As of January 31, 2020, NAU’s portfolio of sponsored research subject to export control regulations (four projects) is not significant relative to the total number of sponsored research projects (507) and, as such, the maturity of the current export control policies, procedures and practices appears relatively reasonable in addressing that risk. However, NAU’s growing overall portfolio of sponsored and unsponsored research, and prominence combined with its expanding international collaboration, and the impact of the regulations on many other areas of the University, indicates the possibility for more Export Control activity than may be currently known and the likelihood of an increase in export control risk going forward. In this regard, NAU attention to research compliance in this area, among other research compliance risks, is important to ensure that NAU’s research program remains in compliance with applicable federal laws and regulations. The improvement opportunities in this report are thereby focused on maturing existing processes to best prepare for change going forward.

Observations:

The current AVP of Research has been instrumental in implementing an export control process for sponsored research projects that did not exist in any material way prior to his arrival. This process has improved assurance that research that is, or is likely to become, subject to export control regulations is identified going forward (i.e., as new research is proposed) including, but not limited to:
• Implementation of formal export control policy and procedures and an NAU website making the policies, procedures and related information available to all NAU faculty, staff and students;
• Implementation of formal research pre-award controls to help identify and review the potential for export control oversight and monitoring;
• Organization and documentation of identified export control related sponsored research;
• Implementation of formal technology control plans (TCP) where required by the regulations; and,
• Training of all principal investigators and supporting faculty, staff and students supporting export control identified research.

We identified five areas of improvement as summarized below and detailed in the Audit Results section of this report:
• More formal and structural support for the NAU Export Control Administrator (ECA) as the University ECA as opposed to only the ECA for sponsored and unsponsored research.
• Periodic assessment of risk to ensure export control compliance policies, procedures and practices mature as the related risk environment changes.
• Research and Office of Research Compliance collaboration with other NAU departments and functions that have an impact on, are impacted by, or are better positioned to apply certain processes and controls to support export control regulations.
• Implementing metrics and/or periodic reporting to improve oversight and monitoring of research subject to export control regulations.
• Expanding export control training to ensure those who need to know and have an influence on export control identification are aware of the regulatory impact on or by their areas.

We also identified some older but active sponsored research projects for which Export Control regulations could apply and some Export Control policy and procedure edits that the Office of Research Compliance is addressing.

The control standards considered, related control environment assessment and any related improvement opportunities (IO) identified are summarized in the following table.

<table>
<thead>
<tr>
<th>General Control Standard</th>
<th>Control Environment/Assessment</th>
<th>IO No.</th>
<th>Page No.</th>
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<tbody>
<tr>
<td>Reliability and Integrity of Financial and Operational Information:</td>
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<tr>
<td>• Research subject to Export Control compliance are centrally tracked with sufficient documentation to ensure proper oversight.</td>
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<td>Safeguarding of Assets:</td>
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<tr>
<td>• Commitment to Export Control compliance is evident.</td>
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<td>• Export Control related technology and other related assets are protected to avoid compromise to foreign parties and/or outright theft.</td>
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<td>2,3</td>
<td>7,8</td>
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<tr>
<td>• Shipment of and/or communications about technology and/or devices subject to export control restrictions are properly managed.</td>
<td></td>
<td>2,3</td>
<td>7,8</td>
</tr>
<tr>
<td>• Travel abroad is managed to minimize the likelihood of the inappropriate sharing of technology and/or devices subject to export control restrictions are properly managed.</td>
<td></td>
<td>2,3</td>
<td>7,8</td>
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General Control Standard
(The bulleted items are internal control objectives that apply to the general control standards and will differ for each audit.)

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<tr>
<th>Control Environment/Assessment</th>
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<tr>
<td>Effectiveness and Efficiency of Operations:</td>
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<td>• Procedures have been implemented to effectively identify the Export Control risks evident at NAU and Export Control risk has been assessed to ensure the proper alignment of resources and process.</td>
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<td>7,10</td>
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<td>• NAU-wide processes are built collaboratively to ensure all functions impacting and / or impacted by Export Control regulations are involved.</td>
<td>2,3</td>
<td>7,9</td>
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<tr>
<td>Compliance with Laws and Regulations:</td>
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<tr>
<td>• An Export Control Administrator has been formally identified with NAU-wide authority.</td>
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<tr>
<td>• Policy and procedures have been implemented to address Export Control compliance.</td>
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<td>7</td>
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<tr>
<td>• All research subject to Export Control Regulations are identified.</td>
<td>3</td>
<td>9</td>
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<tr>
<td>• All research subject to Export Control Regulations are monitored to ensure applicable compliance (e.g., Technology Control Plan Implemented, etc.).</td>
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<td>• Required records are maintained supporting compliance.</td>
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<tr>
<td>• Researchers and vendors are scanned to ensure NAU is not doing business with parties blocked, denied, debarred or otherwise restricted by one of the federal agencies administering Export Control regulations.</td>
<td>2,3</td>
<td>7,9</td>
</tr>
<tr>
<td>• Portable devices are encrypted and tracked when individuals subject to Export Control regulations travel abroad.</td>
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<td>12</td>
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<tr>
<td>• Compliance training is provided and tracked to ensure individuals who need to know understand and implement Export Control compliance requirements.</td>
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Legend:

- Reasonably Strong Controls In Place
- Opportunity for Improvement
- Significant Opportunity for Improvement

We appreciate the assistance and cooperation provided by the leadership and staff of the Office of Research Compliance, Office of Sponsored Projects, the various departments interviewed to determine the existence and nature of controls supporting compliance outside of Research, and the principal investigators currently leading sponsored research subject to export control regulations.
Audit Results: Improvement Opportunities & Solutions

1. Expanding responsibility for Export Control compliance under the joint responsibility of Capital Planning & Campus Operations, Information Technology Service, the Provost and Research, combined with expanding the authority of the Export Control Administrator to direct Export Control compliance process and requirements across the University, would reduce the risk faced by NAU in ensuring compliance with federal Export Control regulations.

Solution: A formal communication to all NAU executives will be made to establish NAU’s Export Control Administrator (ECA) with the authority to set and require changes to policy, procedure and practice designed to improve NAU compliance with applicable Export Control regulations under the joint responsibility of the VP of Research, Provost, VP for Capital Planning & Campus Operations, and Chief Information Officer. This communication should require:

- Each area of the University deemed by the ECA to have responsibilities with direct Export Control impact will designate a responsible party who will maintain a dotted line reporting relationship to the ECA that is supported by the Executive of that area.

- NAU executives affected by these regulations will be required to support and provide the resources necessary to implement the required changes. Where such changes prove challenging, such as being deemed unnecessarily onerous, they will be deferred to an Export Control Oversight or Advisory Committee to be established by the ECA with representation from key departments, including representation from Finance, to deliberate and identify agreeable approaches and any required / available resources to support ongoing compliance.

Responsible Parties:
NAU Executive Team Members –
David Schultz, VP Research
Diane Stearns, Provost
Daniel Okoli, VP, Capital Planning & Campus Operations
Steve Burrell, Chief Information Officer
David Faguy, AVP Research Compliance
Bjorn Flugstad, VP, Finance, Institutional Planning and Analysis

Implementation Date: August 30, 2020

DETAILS:
Condition: NAU has properly identified and formally named an Export Control Administrator (ECA) who reports directly to the Vice President for Research. While the ECA was established by a formal letter issued by the NAU President in December 2017, that letter was issued directly to the ECA and copied only to NAU’s General Counsel and the VP of Research. The letter properly identifies that ECA is the “Empowered Official for Northern Arizona University” but then goes on to note that, “Although you are the University’s designated expert regarding these export control matters, you will exercise this grant of authority under the supervision and direction of...Northern Arizona University’s Vice President for Research.” As noted previously in the report background, Export Control compliance is a University-wide matter.

The ECA is responsible for Research Compliance in the reporting relationship to the VP for Research. There are many research-oriented regulations beyond Export Control that can be complex and onerous, thereby requiring regular oversight to help ensure appropriate levels of compliance. Also, as noted, NAU’s Research enterprise has grown significantly over the last five or more years, nearly doubling in total expenditures and the number of active sponsored projects.
Audit Results: Improvement Opportunities & Solutions

The reporting and accountability structure combined with the breadth of responsibility imposed on the ECA creates challenges (see also Improvement Opportunity 3 and 4):

- Whether real or perceived, necessary changes can only be provided as recommendations to areas outside of Research. Those recommendations then require executive approval from that area, thereby resulting in the recommendations being seen as lower priority for that area since they are deemed a research problem instead of necessary to ensure overall NAU compliance with Export Control regulations.
- Without dedicated resources to support Export Control measures, the ECA must rely on the cooperation and availability of resources in these other areas to ensure compliance.
- Without at least dotted line reporting responsibilities with these areas, proper oversight of Export Control compliance is not readily attainable.

Criteria: Applicable federal regulations require protection of U.S. security and trade as administered by three federal agencies:

- Department of Commerce, Bureau of Industry and Security: Export Administration Regulations (EAR)
- Department of State: International Traffic in Arms Regulations (ITAR)
- Treasury Department: Office of Foreign Assets Control (OFAC) and the Federal Acquisition Regulation Final Rule on Employment Eligibility Verification

Also, a non-scientific internet search disclosed that the use of a committee oversight structure for export control is not uncommon.

Cause: While the proper intentions were in place in establishing the Export Control Administrator role, the structure and resourcing for the positions do not support the ECA in most effectively providing broad oversight and direction for the full impact of the federal Export Control regulations.

Effect / Impact: NAU could become out of compliance with key Export Control regulations, which could result in fines and penalties for both the individuals involved and NAU, loss of research funding, a reduction in NAU’s NSF research ranking, and negative publicity.

2. Periodic assessment of control risk should help NAU balance its research compliance resources with expanding export control compliance risk, among other critical research compliance risks.

Solution: The Export Control Administrator (ECA) will apply the risk assessment tool recommended by the Association of University Export Control Officers (AUECO) on a periodic basis (at least annually in support of budget preparations). The assessment and related updates will be reviewed with the VP for Research and VP for Finance, Institutional Planning and Analysis, to maintain a pulse on export control risk and ensure compliance gaps are identified and related processes matured as dictated by the changing risk environment. An Export Controls Oversight Committee structure as noted at IO 1 will also be considered as a mechanism to aid in guiding compliance processes going forward.

Responsible Parties:  
David Schultz, VP Research  
Bjorn Flugstad, VP, Finance, Institutional Planning and Analysis  
Diane Stearns, Provost  
Daniel Okoli, VP, Capital Planning & Campus Operations  
Steve Burrell, Chief Information Officer  
David Faguy, AVP Research Compliance and ECA  

Implementation Date:  
March 31, 2021
Audit Results: Improvement Opportunities & Solutions

DETAILS:

Condition: NAU’s current portfolio of sponsored research subject to export control regulations appears relatively insignificant, especially relative to the number of active research projects (four export control projects or 0.08% of approximately 507 active sponsored projects as of January 31, 2020). However, the following factors indicate the likelihood of a potential increase in export control risk oversight challenges going forward:

- NAU’s growing overall research portfolio and prominence,
- NAU’s expanding international collaboration, and
- Limited resources focused on research compliance oversight.

In this regard, NAU attention to research compliance in this area, among other critical research compliance risks, is important to avoiding non-compliance with applicable federal laws and regulations.

While notable export control compliance mechanisms have been implemented, there are areas of risk that may become more concerning as NAU’s international and research programs expand. For instance, current processes do not directly address:

- Assessment of all research in progress prior to the implementation of current export control compliance oversight processes to ensure that all research subject to Export Control regulations have been identified and addressed.

- The ongoing identification of export control activity that could result in compliance lapses, which might include but is not limited to:
  - Unauthorized communication of export control activity to foreign persons or entities by the principal investigator or researchers, staff and / or students supporting the related research.
  - Taking or shipping export control regulated technology or devices out of the U.S. without applicable licenses.
  - Travel abroad without NAU knowledge by the principal investigator or researchers, staff and / or students supporting the related research. There is a current initiative being supported by the Provost to encourage and ultimately require registration of all international travel by NAU faculty, students and staff as identified in our Foreign Travel Audit, report dated July 11, 2019.
  - Export control communications and training are currently focused on those individuals who are already identified as supporting research subject to export control regulations. See more details below at Improvement Opportunity 5.

Criteria: Applicable federal regulations require protection of U.S. security and trade as administered by three federal agencies:

- Department of Commerce, Bureau of Industry and Security: Export Administration Regulations (EAR)
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Good business practices include ongoing assessment of critical compliance risks to ensure reasonable, effective processes are in place to ensure compliance.

Cause: Responsibility for all research compliance oversight currently rests with one individual who has made notable progress in research over the last two plus years.

Effect / Impact: Lack of insight to changing compliance risk could result in NAU inadvertently becoming non-compliant with applicable federal laws and regulations.
3. Cooperation from various departments across the University could result in improved identification of potential export control research and related activity, thereby improving the effectiveness of related compliance efforts.

**Solution:** The VP of Research and AVP of Research Compliance will initiate collaboration with the following departments to help identify and implement processes that keep Research Compliance updated as follows:

- Contracts, Purchasing and Risk Management: Ensure sanctioned vendors are identified and shipping is monitored to ensure only appropriate international shipments occurred.
- Enrollment Management: Ensure online enrollment by individuals from U.S. sanctioned countries are identified and prevented.
- Human Resources: Ensure that I-9 and conflict of interest processes identify possible foreign relationship concerns.
- Information Technology Resources: Ensure data security is sufficiently robust as related to the protection of export control technology both owned by NAU and by NAU’s partners.
- Provost: Ensure the registration and monitoring of international travel by NAU faculty, students and staff.
  - Center for International Education: Ensure international student travel is tracked including identification of travel to and from sanctioned countries.
  - Graduate Studies: Ensure graduate students involved in research are proactively identified and those involved in export control research can be more readily monitored.
- Research: Office of Sponsored Projects: Ensure that processes for identifying export control are sufficiently robust, including more formal advanced identification of research as fundamental research.

**Responsible Parties:**
- David Schultz, VP Research
- David Faguy, AVP Research Compliance
- Dan Okoli, VP Capital Planning & Campus Operations
- Anika Olsen, VP Enrollment Management
- Diane Stearns, Provost
- Josh Mackey, CHRO and Interim Chief of Staff
- Steve Burrell, Chief Information Officer
- Daniel Palm, AVP Center for International Education

**Implementation Date:** March 31, 2021

**DETAILS:**

**Condition:** Identifying activity that could be or is in violation of export control regulations is difficult in an academic environment. Also, limited research compliance resources are available to monitor the numerous ways in which technology and devices subject to export control regulations could be relayed inappropriately (without an official federal license) to foreign persons or entities. Current potential gaps in export control compliance include:

- CIE currently tracks all international student travel but there is no analysis of travel to sanctioned countries or reporting of such information to Research Compliance.
- A process has not been designed to ensure individuals from sanctioned countries have not enrolled in NAU coursework. We identified no such situations during the audit.
- Graduate research work is tracked, but without consideration for export control related matters and with loose identification of graduate assistants who may be transferred to export control research projects.
Audit Results: Improvement Opportunities & Solutions

- While HR is working on updating the information it shares with the Office of Sponsored Projects related to I-9 and conflict of interest (NAU e-CERT) processes, these processes should be updated to ensure such information alerts Research Compliance if any export control related red flags are identified.
- ITS Security already uses the NIST framework as a guide. However, data security challenges are an ongoing necessity requiring Research Compliance and ITS Security to remain in contact about changing programs, regulatory requirements, etc. to ensure negative impact on Export Control compliance is avoided. Additionally, there is no current process in place to ensure that faculty or other individuals involved in Export Control related research who travel abroad are not taking technology with them where a license to do so does not exist. One option might be to provide traveling laptops to such individuals when they travel to help ensure such information is properly managed and protected.
- As previously noted, the Provost is championing an international travel registration process for NAU faculty, students and staff. As this process is still being designed, identification and communication of export control related information should be built into that design.
- The Office of Sponsored Projects currently applies pre-award processes designed to identify potential export control compliance risks before projects are submitted and / or awarded. However, as the Fundamental Research Exclusion is key to separating research that is or is not subject to export control regulations, these processes should be updated to ensure evaluation and application of that and any other exclusions are positively identified and documented for all research projects.

Criteria: Applicable federal regulations require protection of U.S. security and trade as administered by three federal agencies:
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- Department of State: International Traffic in Arms Regulations (ITAR)
- Treasury Department: Office of Foreign Assets Control (OFAC) and the Federal Acquisition Regulation Final Rule on Employment Eligibility Verification

Good business practices include maximizing available university resources to design effective and efficient compliance processes.

Cause: The nature of the export control regulations combined with limited compliance resources, notable growth in NAU research, and numerous NAU operational priorities make it difficult to quickly implement or enhance processes that can improve export control awareness and oversight.

Effect / Impact: Lack of coordination across NAU will make it difficult to implement the type of processes needed to address all aspects of the export control regulations applicable to NAU, especially if export control regulated research and other activity expands. Without such coordination non-compliance with applicable federal laws and regulations could occur.

4. Establishing reporting metrics and process workflows in the current export control documentation process could improve monitoring of known export control related research.

Solution: The Office of Research compliance will analyze current processes for documenting and monitoring export control compliance to identify metrics and reporting mechanisms that would prove useful to compliance oversight. This analysis will include identification of processes that can provide assurance related, but not limited, to:
- Principal investigators, faculty, students and staff supporting export control compliance by periodically reporting information to Research Compliance to ensure:
  - Any licensing requirements can be timely pursued,
Audit Results: Improvement Opportunities & Solutions

- Changes in research approach, research team make-up or lab structure / location can be evaluated for impact on compliance efforts and related Technology Control Plans, etc.;
- Periodic review and applicable updates of Technology Control Plans;
- Making department chairs and deans overseeing such research aware of critical developments and any required changes in how they may provide oversight of such research and related export control requirements; and,
- Evaluating the effectiveness of processes implemented to determine if changes should be pursued.

**Responsible Parties:**
David Schultz, VP Research
David Faguy, AVP Research Compliance

**Implementation Date:**
August 31, 2020

**DETAILS:**

**Condition:**
Documentation related to all identified export control research is maintained in a SharePoint site implemented and managed by the Office of Research Compliance. This site appears to include the necessary documentation needed to understand and oversee those projects, including identification of the applicable research awards, funding agency(ies), principal and co-principal investigators, related non-disclosure agreements and Technology Control Plans.

However, related documentation and processes are not in place to ensure changes in researcher or student assistant assignments are identified and tracked, that requirements set forth in the Technology Control Plans are being addressed and updated as necessary, that any export licensing needs can be timely identified and addressed, or that changes in the research and research outcomes may result in changes in how the export control regulations should be applied.

**Criteria:** Applicable federal regulations require protection of U.S. security and trade as administered by three federal agencies:
- Department of Commerce, Bureau of Industry and Security: Export Administration Regulations (EAR)
- Department of State: International Traffic in Arms Regulations (ITAR)
- Treasury Department: Office of Foreign Assets Control (OFAC) and the Federal Acquisition Regulation Final Rule on Employment Eligibility Verification

Export Control regulations and good business practice require the implementation of monitoring processes, including supporting metrics and periodic reporting, to ensure compliance is maintained.

**Cause:** The nature of the export control regulations combined with limited compliance resources, notable growth in NAU research and numerous NAU operational priorities make it difficult to quickly implement or enhance processes that can improve export control awareness and oversight.

**Effect / Impact:** The lack of robust monitoring efforts could result in non-compliance with applicable federal laws and regulations.
Audit Results: Improvement Opportunities & Solutions

5. Improving training documentation and expanding export control training to those individuals directly related to the teams supporting research subject to Export Control regulations could improve awareness and reduce the risk of non-compliance with Export Control regulations.

Solution: The Office of Research Compliance will continue providing export control specific training to all personnel involved in research identified as being subject to export control regulations. In addition, the Office of Research Compliance will assess the level and frequency of export control training needed by individuals throughout the NAU Community, including implementing specific training for individuals in the following areas:

- Center for International Education
- Contracts, Purchasing and Risk Management
- Enrollment Management
- Graduate Studies
- Human Resources
- Information Technology Resources
- Provost – Academic Deans and Chairs, and all Faculty
- Research – Office of Sponsored Projects

Additionally, procedures will be implemented to ensure all current and future training is documented to identify who completed training, the nature of training completed and the dates of completion.

Responsible Parties:
David Schultz, VP Research
Diane Stearns, Provost
Josh Mackey, Chief Human Resources Officer
David Faguy, AVP Research Compliance

Implementation Date: August 31, 2020

DETAILS:

Condition: Export control training is currently focused on the principal investigators, faculty, students and staff supporting known export control related research, which is important to ensuring the ongoing compliance with export control regulations in those areas. Additionally, training has been provided to the Office of Sponsored Projects and some other personnel.

However, the training needs of other areas in the organization that currently do, should or may in the future be required to provide some level of support to ensure ongoing export control compliance have not been formally assessed and as a result have received little or no training. In this regard, the AVP of Research Compliance has been analyzing online options for providing such training through the Collaborative Institutional Training Initiative (CITI), a platform already being used by NAU for certain research and other training. Current training opportunities that have not yet been addressed include:

- Formally documenting the training provided, to whom it was provided and the dates those individuals completed the training. Actual training slide decks are maintained in the SharePoint Export Control site but without applicable details.
- Assessment of training needs to ensure mandatory, periodic and ongoing training needs are applied to individuals and functions in a manner that best addresses the risk evident at NAU.
- Training in areas that impact or are impacted by research activities and foreign relations including ensuring that:
Audit Results: Improvement Opportunities & Solutions

- Center for International Education personnel understand the implications of international students and the changing nature of U.S. sanctions of countries as political and other global climates change and evolve.
- Contract management and personnel responsible for shipping items from NAU understand the implications of dealing with foreign nations.
- Admission / enrollment management personnel understand the impact of sanctions on student prospecting and recruitment.
- Graduate Studies personnel understand the risks of assigning graduate students, and especially foreign graduate students, to supporting research projects.
- Human Resources personnel understand the significance of identifying employee relationships with foreign persons or entities.
- IT Security personnel are aware of new export control research projects that require new system and/or data protection needs.
- Academic deans and chairs are aware of the implications of export control compliance to aid in the oversight of known export control related research and supporting the identification of potential export control compliance needs.
- Office of Sponsored Projects maintains diligence in following up on export control flags documented in the Cayuse system and reviewed in the Visual Compliance system (see Exhibit B for more details on systems used by Research Compliance to aid in ensuring compliance with Export Control regulations).
- The Institutional Review Board (IRB) and Institution Animal Care and Use Committee (IACUC) are sufficiently able to identify and report potential export control concerns in their review of research proposals and activity.

**Criteria:** Applicable federal regulations require protection of U.S. security and trade as administered by three federal agencies:

- Department of Commerce, Bureau of Industry and Security: Export Administration Regulations (EAR)
- Department of State: International Traffic in Arms Regulations (ITAR)
- Treasury Department: Office of Foreign Assets Control (OFAC) and the Federal Acquisition Regulation Final Rule on Employment Eligibility Verification

The Export Control regulations and good business practices include the implementation of training programs that ensure individuals understand these regulations and their application to help ensure compliance.

**Cause:** The nature of the export control regulations combined with limited compliance resources, notable growth in NAU research and numerous NAU operational priorities make it difficult to quickly implement or enhance processes that can improve export control awareness and oversight.

**Effect / Impact:** The lack of robust monitoring efforts could result in non-compliance with applicable federal laws and regulations.
Exhibit A  
Export Control Regulations

There are four basic types of Exports: Export, Deemed Export, Re-export and Deemed Re-export (see Key Acronyms and Terms list below). In addition to actual shipment of a commodity out of the country, the export regulations also control the transfer, release or disclosure to foreign persons in the United States of technical data about controlled commodities. The “deemed export” regulation states that a transfer of “technology” (EAR term – Export Administration Regulations, Commerce Department) or “technical data” (ITAR term – International Traffic in Arms Regulations, State Department) to the foreign person is “deemed” to be an export to the home country of the foreign person. Accordingly, for all controlled commodities, a license or license exception is required prior to the transfer of “technology” or “technical data” about the controlled commodity to foreign persons inside the U.S. The terms “technology” and “technical data” mean specific information necessary for the development, production, or use of a commodity, and usually takes the form of blueprints, drawings, photographs, plans, diagrams, models, formulae, tables, engineering specifications, and similar documentation. The “deemed export” rules apply to transfer of such technical information to foreign nationals inside the U.S.

Exports happen in many ways: UPS, mail, freight forwarder, hand carried on airplane, in luggage, fax, phone and email, “deemed” export, such as:
• A U.S. citizen instant messages a South Korean national working together in New York City about technical drawings for items controlled under U.S. export regulations.
• A U.S. employee emails to India software updates necessary to operate an item controlled under U.S. export regulations.
• A professor at Harvard University lectures in China on her research relating to a project with technology controlled under U.S. export regulations.

Specific examples of technologies likely to trigger export controls or discussion of export controls
• Materials science:
  - Materials used on airplanes, rockets, space vehicles that need a certain hardness or need to withstand high heat
  - Paints
• Computer science
  - Artificial intelligence
• Engineering
  - Combustion related to rocket fuel
  - Sensors
• Optics
  - Mirrors

Export Control Issues Related to Travel Abroad
• Taking certain items outside the US might require a license, for example:
  - Laptops
  - Cell phones
  - Data, technology
  - Blueprints, schematics

Record Keeping
• Export Administration Regulations (EAR) Part 762
• Recordkeeping
• International Traffic in Arms Regulations (ITAR)
• Maintenance of Records by Registrants (122.5),
• Recordkeeping requirement for exemptions (123.26)
• Records must be kept for five years
### EXHIBIT B
NAU Research Support Systems

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>PROCESSES</th>
<th>KEY Export Control DATA / Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>BioRaft</td>
<td>Good central data point for all wet lab research.</td>
<td>Includes identification of related current NAU research projects. No direct export control compliance support otherwise.</td>
</tr>
</tbody>
</table>
| Cayuse                | Includes all directly funded research – all but those solely subsidized by NAU.  
Includes the grant proposal and related documents and the project budget. | Cayuse includes questions and fields that are required to be completed by the research principal investigator (PI) in submitting a research proposal (pre-award) that identifies if a PI or project includes “international collaborators” or other export control related triggers. Such triggers result in review of related information in Visual Compliance (see below) and notification to the Export Control Administrator to review the project for potential Export Control compliance considerations. |
| Lenel Key Card        | Electronic room/door access control.                                      | Data on who has what access to controlled research space. Lenel access control is currently applied to two of the four research projects subject to Export Control regulations including control over access to research space, which limits who can enter that research space. |
| PeopleSoft            | The PeopleSoft Financials module includes a vendor sanction checking service. | The sanction work list is reviewed daily by the Purchasing Department with procedures to notify the Export Control Administrator if sanctioned vendors are identified. |
| Visual Compliance     | An ASP/cloud model service used to check information against various federal sanction lists, including for export control sanctioned countries, individuals, items, etc. | Allows for sanction checking before a proposal is submitted or at the time of award. |