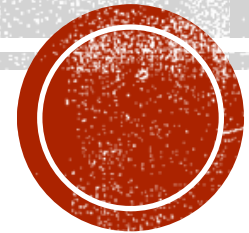# CONTROLLED RESEARCH AT NORTHEASTERN

Northeastern University
Research Enterprise Services

AGENDA

- Types of Research
- Fundamental Research
- Export Controlled Research
- Regulatory Agencies
- Controlled Unclassified Research
- Classified Research
- CUI and Dissemination Controls
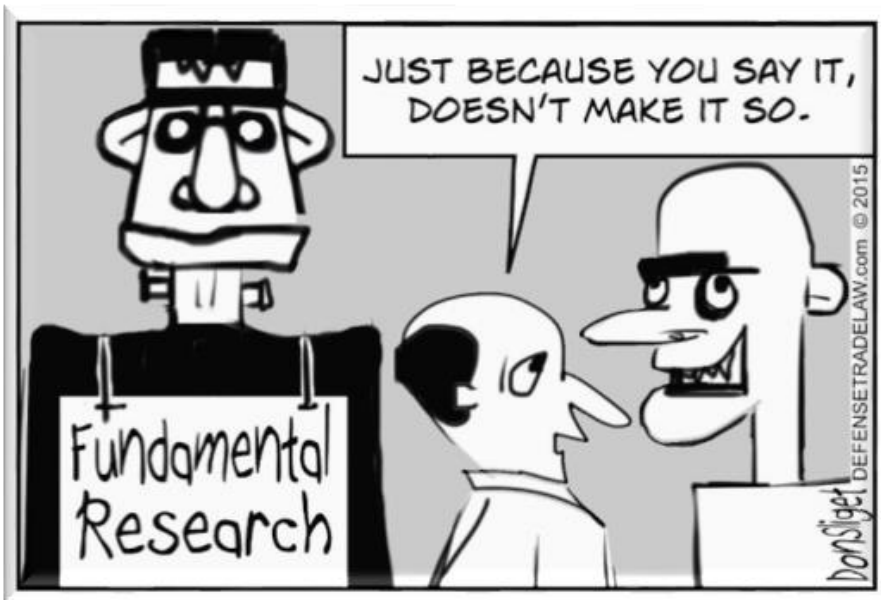- Questions

TYPES OF RESEARCH

Classified Research

**Export Controlled
(CDI, ITAR, EAR Dual-Use)**

**Export Controlled EAR
(EAR99, NLR, Low Dual-Use)**

Fundamental Research

FUNDAMENTAL RESEARCH

WHAT IS FUNDAMENTAL RESEARCH?

Fundamental Research – Information arising during or resulting from basic and applied research in science and engineering, the results of which are published and shared broadly in the scientific community.

RESEARCH EXEMPTIONS FOR UNIVERSITIES

Fundamental Research Exemption (ITAR, EAR)	No license is required to conduct fundamental research, "research in science, engineering or mathematics, the results of which ordinarily are published and shared broadly within the research community and for which the researchers have not accepted restrictions for proprietary or national security reasons."
Public Domain Exemption (ITAR, EAR)	No license is required to export information or research that are generally available in the public domain.
Education Exemption (ITAR, EAR)	No license is required to transfer information to students, including foreign nationals, concerning general scientific, mathematical or engineering principles commonly taught in schools, colleges or universities

FUNDAMENTAL RESEARCH DOES NOT COVER:

Export Controlled Activities – "defense services"

Research involving the creation or use of certain encryption source code

Development or export of tangible items such as hardware

Export controlled technology or technical data received from a sponsor

Transactions involving embargoed or sanctioned countries, individuals, entities, and restricted end users, must be reviewed independent from Fundamental Research for license requirements

EXPORT CONTROLLED RESEARCH

WHY DO WE CONTROL EXPORTS?

Internal Considerations

- National Security Concerns
- Nuclear Nonproliferation
- Anti-Terrorism
- Chemical & Biological Weapons
- Missile Technology
- Regional Stability
- Crime Control
- Foreign Policy Initiatives
- Economic Concerns

External Considerations

- Wassenaar Arrangement
- Missile Technology Control Regime
- Nuclear Suppliers Group
- Australia Group

EXPORT AND DEEMED EXPORT

Export = Any Shipment, Transmission or Transfer of: Commodities, Software Technology

Deemed Export Rule = An export of ''controlled'' technology or source code is "deemed to take place when it is release to a foreign person in the United States.

Exception is Fundamental Research.

EXPORT CONTROL REVIEW TRIGGERS IN RESEARCH

- **Funding Source (DOD, DOE, Private Companies)**

- **Publication & Dissemination**

- **Research Restricted to U.S. Persons**

- **Extreme IT Security Requirements**

- **Receiving, storing or generating CUI (CDI, export-controlled data, etc.)**

- **Certain Types of Research**

  - Military or Defense Articles and Services

  - High Performance Computing or Encryption Technology

  - Dual Use Technologies

  - Missiles & Missile Technology

  - Chemical/Biological weapons

  - Nuclear Technology

  - Select Agents & Toxins

  - Space Technology & Satellites

At last he had found the Regulatory Guidelines.

REGULATORY AGENCIES

U.S. Agencies Responsible for Export Controls

Department of State, Directorate of Defense Trade Control (DDTC)
International Traffic in Arms Regulations (ITAR)

Department of Commerce, Bureau of Industry and Security (BIS)
Export Administration Regulations (EAR)

Department of Treasury, Office of Foreign Assets Control (OFAC)
Foreign Asset Control Regulations (FARC)

Department of Energy (DOE) &
Nuclear Regulatory Commission (NRC)

Department of Homeland Security (DHS),
Customs & Border Protection (CBP)

International Traffic in Arms Regulations (ITAR)
Governs all military, weapons, and some space related items, technical data on defense articles and defense services.

U.S. Munitions List (USML)

- Category I: Firearms, Close Assault Weapons and Combat Shotguns
- Category II: Materials, Chemicals, Microorganisms, and Toxins
- Category III: Ammunition/Ordnance
- Category IV: Launch Vehicles, Guided and Ballistic Missiles, Rockets, Torpedoes, Bombs and Mines
- Category V: Explosives and Energetic Materials, Propellants, Incendiary Agents and Their Constituents
- Category VI: Vessels of War and Special Naval Equipment
- Category VII: Tanks and Military Vehicles
- **Category VIII: Aircraft and Associated Equipment**
- Category IX: Military Training Equipment
- Category X: Protective Personnel Equipment
- Category XI: Military Electronics
- Category XII: Fire Control, Range Finder, Optical and Guidance and Control Equipment
- **Category XIII: Materials and Miscellaneous Articles**
- Category XIV: Toxicological Agents, Including Chemical Agents, Biological Agents, and Equipment
- Category XV: Spacecraft Systems and Associated Equipment
- Category XVI: Nuclear Weapons, Design and Testing Related Items
- Category XVII: Classified Articles, Technical Data and Defense Services Not Otherwise Enumerated
- Category XVIII: Directed Energy Weapons
- Category XIX: Gas, Turbine Engines, and Associated Equipment
- **Category XX: Submersible Vessels, Oceanographic and Associated Equipment**
- **Category XXI: Articles, Technical Data and Defense Services Not Otherwise Enumerated**

Export Administration Regulations (EAR)
EAR governs the export of most items including those with military and non-military applications such as Dual Use, Deemed Export and EAR99.

Commerce Control List (CCL)
Export Control Classification Number (**ECCN**) is an alphanumeric designation

Categories

0 = Nuclear materials, facilities and equipment

1 = Materials, Chemicals, Microorganisms and Toxins

2 = Materials Processing

3 = Electronics

4 = Computers

5 = Telecommunications and Information Security

6 = Sensors and Lasers

7 = Navigation and Avionics

8 = Marine

9 = Propulsion Systems, Space Vehicles & Related Equipment

Five Product Groups

A. Systems, Equipment and Components

B. Test, Inspection and Production Equipment

C. Material

D. Software

E. Technology
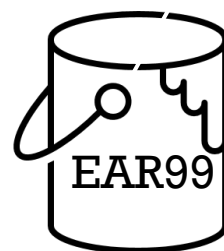
EAR99

Items NOT on the CCL

Lab Equipment EAR99

Medical Items EAR99

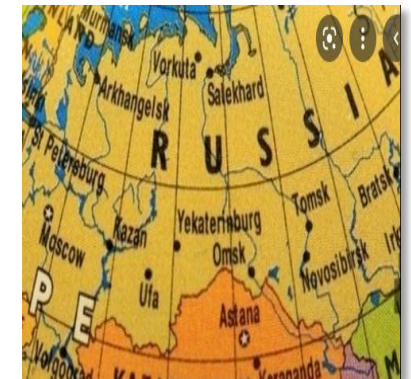Drones 9A012 or EAR99

Pathogens 1C351

Laptops 5A992

Carbon Fiber 1C210

Office of Foreign Assets Control (OFAC)
OFAC enforces economic and trade sanctions based on U.S. foreign policy and national security goals against embargoes countries and/or prohibited or blocked individuals or entities.

Other countries with non-comprehensive sanctions include; China, Crimea Region of Ukraine, Central African Republic, Iraq, Lebanon, Libya, Somalia, South Sudan, Venezuela, Yemen, among others.

CONTROLLED UNCLASSIFIED INFORMATION (CUI)

WHAT IS CUI?
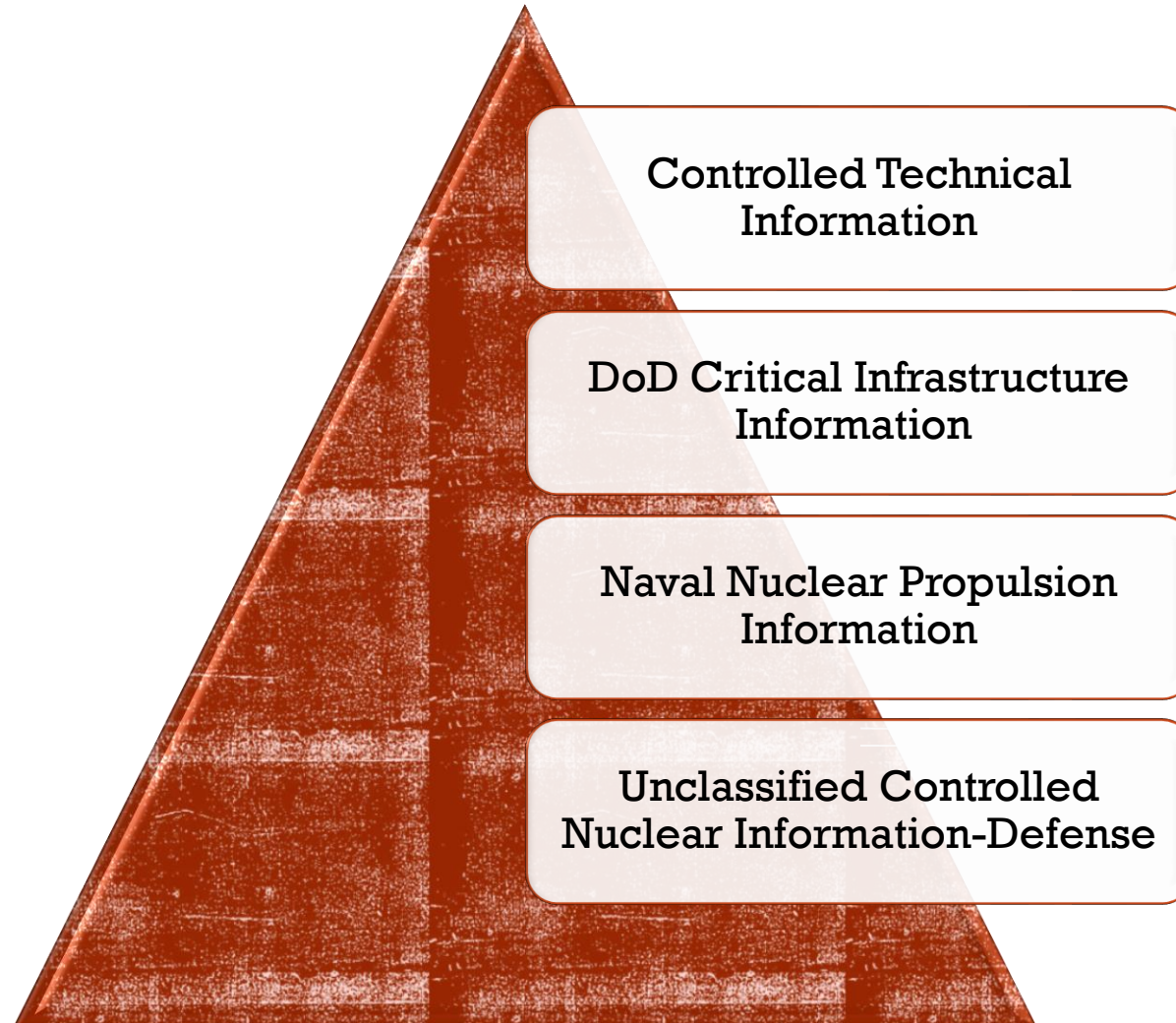
- CUI is controlled unclassified information that the US gov't creates or possesses or that a non-federal entity (such as Northeastern) receives, possesses, or creates for or on behalf of the US gov't, that requires certain information security controls to safeguard.

- There are different types of CUI. **ALL** types of CUI require protection, but not all CUI overlaps with export controls.

CONTROLLED UNCLASSIFIED INFORMATION (CUI)

Proprietary Business

Law Enforcement

Transportation

Financial

Statistical

Immigration

Natural & Cultural Resources

International Agreements

Legal

Procurement & Acquisition

Intelligence

Patent

Privacy

Export Control

Tax

Provisional

Nuclear

Critical Infrastructure

Defense (CDI)

NATO

Classified

FRE

CUI Archives

TYPES OF RESEARCH

Classified Research

**Export Controlled
(CDI, ITAR, EAR Dual-Use)**

**Export Controlled EAR
(EAR99, NLR, Low Dual-Use)**
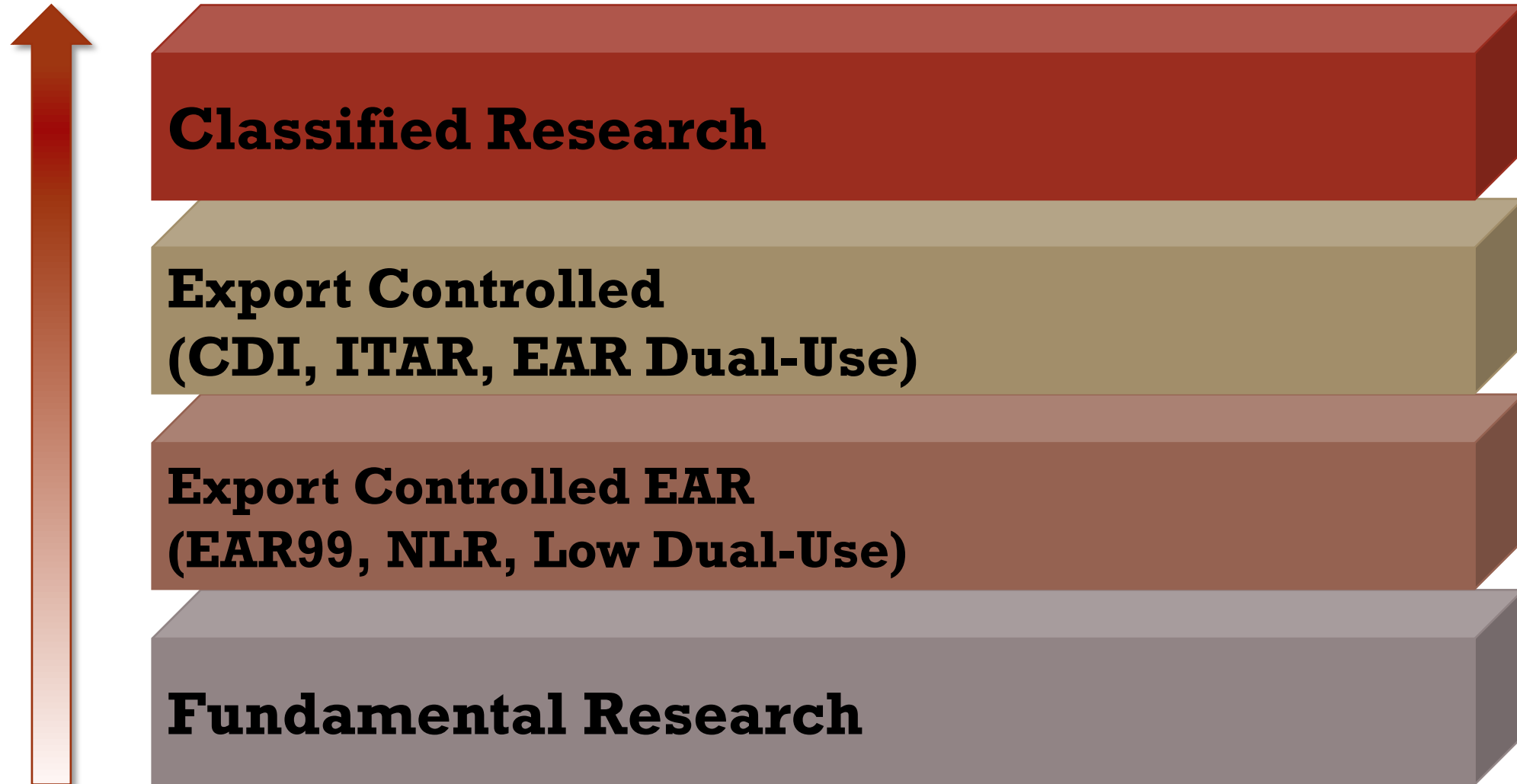
Fundamental Research

CUI &
DISSEMINATION
CONTROLS

OPENNESS IN RESEARCH POLICY

- "The University will not undertake research with restrictions on openness or academic freedom on its campus."

- "Most research can be conducted in accordance with this policy and with the ideals of freedom of inquiry and open exchange of knowledge. The University recognizes that, in a few compelling instances, the best interests of society will weigh against broad participation in research and open exchange of information. In such cases, the Senior Vice Provost for Research may grant exceptions to this policy."

PROPER IDENTIFICATION AND APPLICATION OF CONTROLS IS CRITICAL

CUI Categories

- CUI Categories are listed alphabetically within organizational index grouping.
- Select a Category to view associated detail information.

Organizational Index Grouping	CUI Categories
Critical Infrastructure	- Ammonium Nitrate - Chemical-terrorism Vulnerability Information - Critical Energy Infrastructure Information - Emergency Management - General Critical Infrastructure Information - Information Systems Vulnerability Information - Physical Security - Protected Critical Infrastructure Information - SAFETY Act Information - Toxic Substances - Water Assessments
Defense	- Controlled Technical Information - DoD Critical Infrastructure Security Information - Naval Nuclear Propulsion Information - Unclassified Controlled Nuclear Information - Defense
Export Control	- Export Controlled - Export Controlled Research

Patent	- Patent Applications - Inventions - Secrecy Orders
Privacy	- Contract Use - Death Records - General Privacy - Genetic Information - Health Information - Inspector General Protected - Military Personnel Records - Personnel Records - Student Records
Procurement and Acquisition	- General Procurement and Acquisition - Small Business Research and Technology - Source Selection
Proprietary Business Information	- Entity Registration Information - General Proprietary Business Information - Ocean Common Carrier and Marine Terminal Operator Agreements - Ocean Common Carrier Service Contracts - Proprietary Manufacturer - Proprietary Postal
Provisional	- Homeland Security Agreement Information - Homeland Security Enforcement Information - Information Systems Vulnerability Information - Homeland - International Agreement Information - Homeland - Operations Security Information - Personnel Security Information - Physical Security - Homeland - Privacy Information - Sensitive Personally Identifiable Information
Statistical	- Investment Survey - Pesticide Producer Survey - Statistical Information - US Census

Commerce Country Chart

Reason for Control

| Countries	Chemical & Biological Weapons			Nuclear Nonproliferation		National Security		Missile Tech	Regional Stability		Firearms Convention	Crime Control			Anti-Terrorism	
	CB 1	CB 2	CB 3	NP 1	NP 2	NS 1	NS 2	MT 1	RS 1	RS 2	FC 1	CC 1	CC 2	CC 3	AT 1	AT 2
Poland[3]	X					X		X	X							
Portugal[3]	X					X		X	X							
Qatar	X	X	X	X		X	X	X	X	X		X		X		
Romania[3]	X					X		X	X							
Russia[6]	X	X	X	X	X	X	X	X	X	X		X	X			
Rwanda	X	X		X		X	X	X	X	X		X	X	X		
St. Kitts & Nevis	X	X		X		X	X	X	X	X	X	X		X		
St. Lucia	X	X		X		X	X	X	X	X	X	X		X		
Saint Vincent and the Grenadines	X	X		X		X	X	X	X	X	X	X		X		
Samoa	X	X		X		X	X	X	X	X		X		X		
San Marino	X	X		X		X	X	X	X	X		X		X		
Sao Tome & Principe	X	X		X		X	X	X	X	X		X		X		
Saudi Arabia	X	X	X	X		X	X	X	X	X		X		X		

TYPES OF RESEARCH

Restricted – Clearance Required & Certified Space
Classified Research

EC License Required for Non-U.S. Persons
Export Controlled (CDI, ITAR, EAR Dual-Use)

Generally Open to All (Some Exceptions)
Export Controlled EAR (EAR99, NLR, Low Dual-Use)

Open to All (No Exceptions)
Fundamental Research
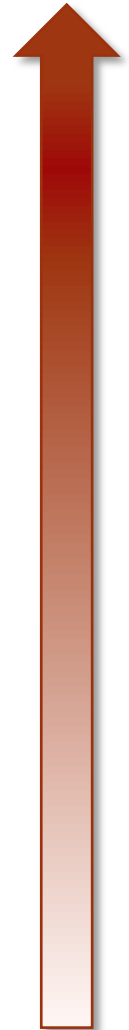
QUESTIONS

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