INTRODUCCIÓN A LA INTERFAZ CIENCIA-POLÍTICAS Y SU APLICACIÓN EN AMÉRICA LATINA

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INGSA Latam SC, GYA member

Directora de Ciencia, Centros y Transferencia de Tecnología, SECTEI. Gobierno de la Ciudad de México

Objetivos de aprendizaje:

- - Analizar críticamente la variedad de enfoques que han impulsado y caracterizado la actividad de la ICP a lo largo del tiempo.
- - Analizar críticamente el papel de los responsables políticos, los científicos y la sociedad en las economías y sociedades modernas.
- - Evaluar críticamente el rol del profesional de la ICP.
- - Explicar y valorar la importancia de la evidencia científica en las políticas públicas.
- - Explicar cómo funciona la ICP en al menos dos sistemas (legislativo y ejecutivo)-Sí hay tiempo-

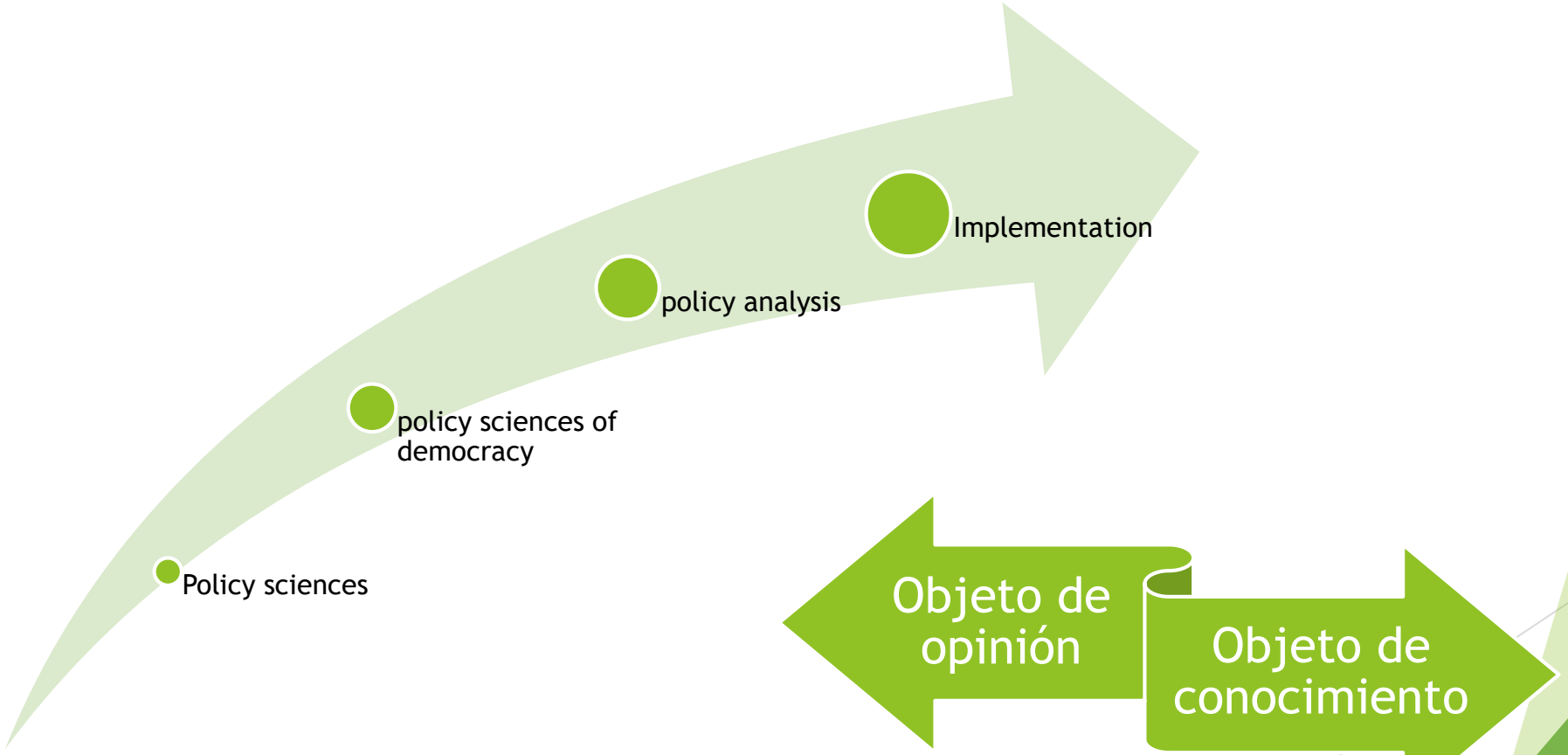
Siempre hay un observador…

Sociedad

Políticas Públicas (PP)

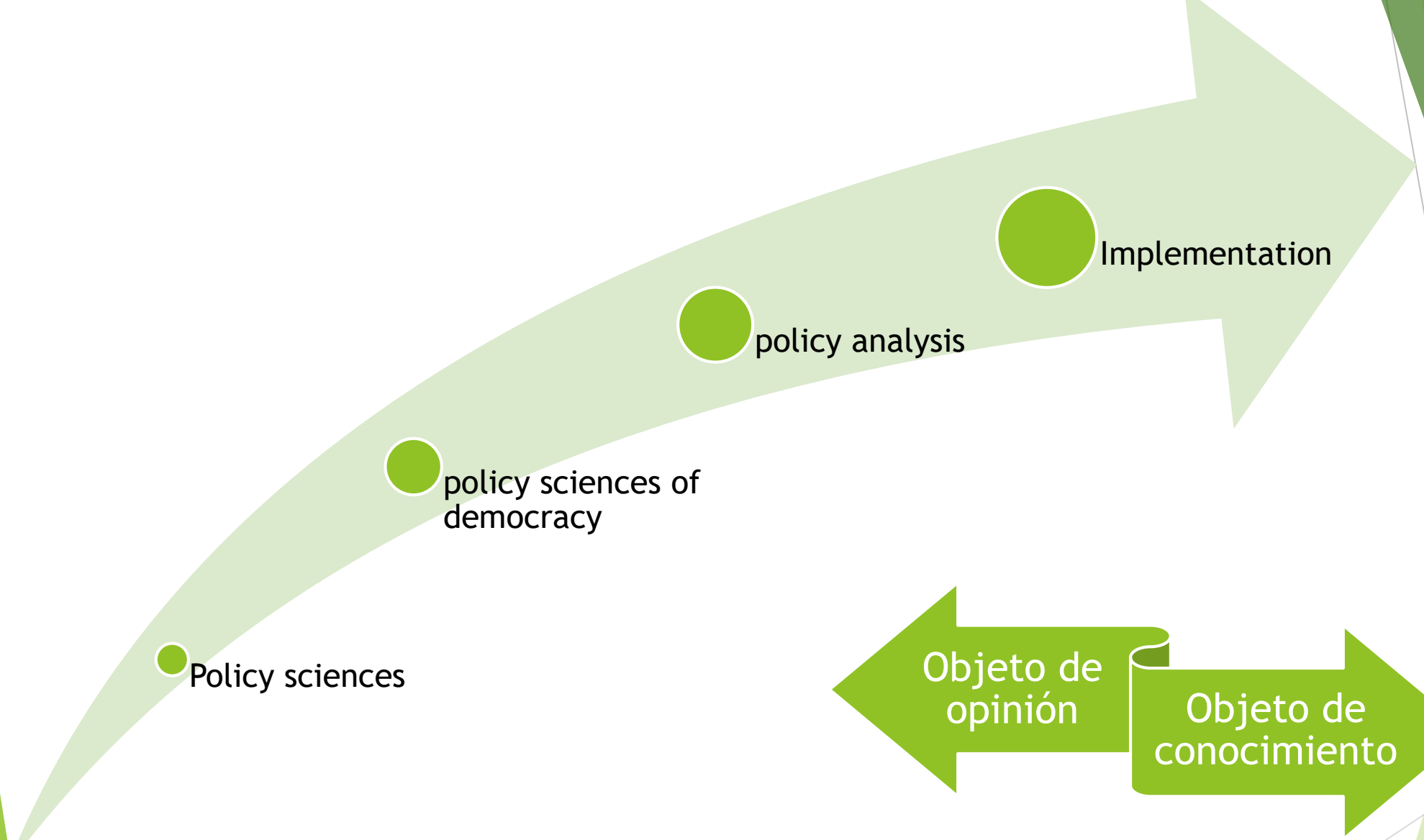
Políticas Públicas (PP)

- Son acciones intencionales porque se orientan a realizar objetivos considerados de valor para la sociedad o a resolver problemas cuya solución se considera de interés o beneficio público, y son acciones causales porque son consideradas idóneas y eficaces para realizar el objetivo o resolver el problema (Aguilar, 2010).



1951. *The policy sciences: Recent developments in scope and method*. Harold Laswell

Aguilar Villanueva, Luis F., 2010. Política Publica. Grupo editorial siglo XXI.



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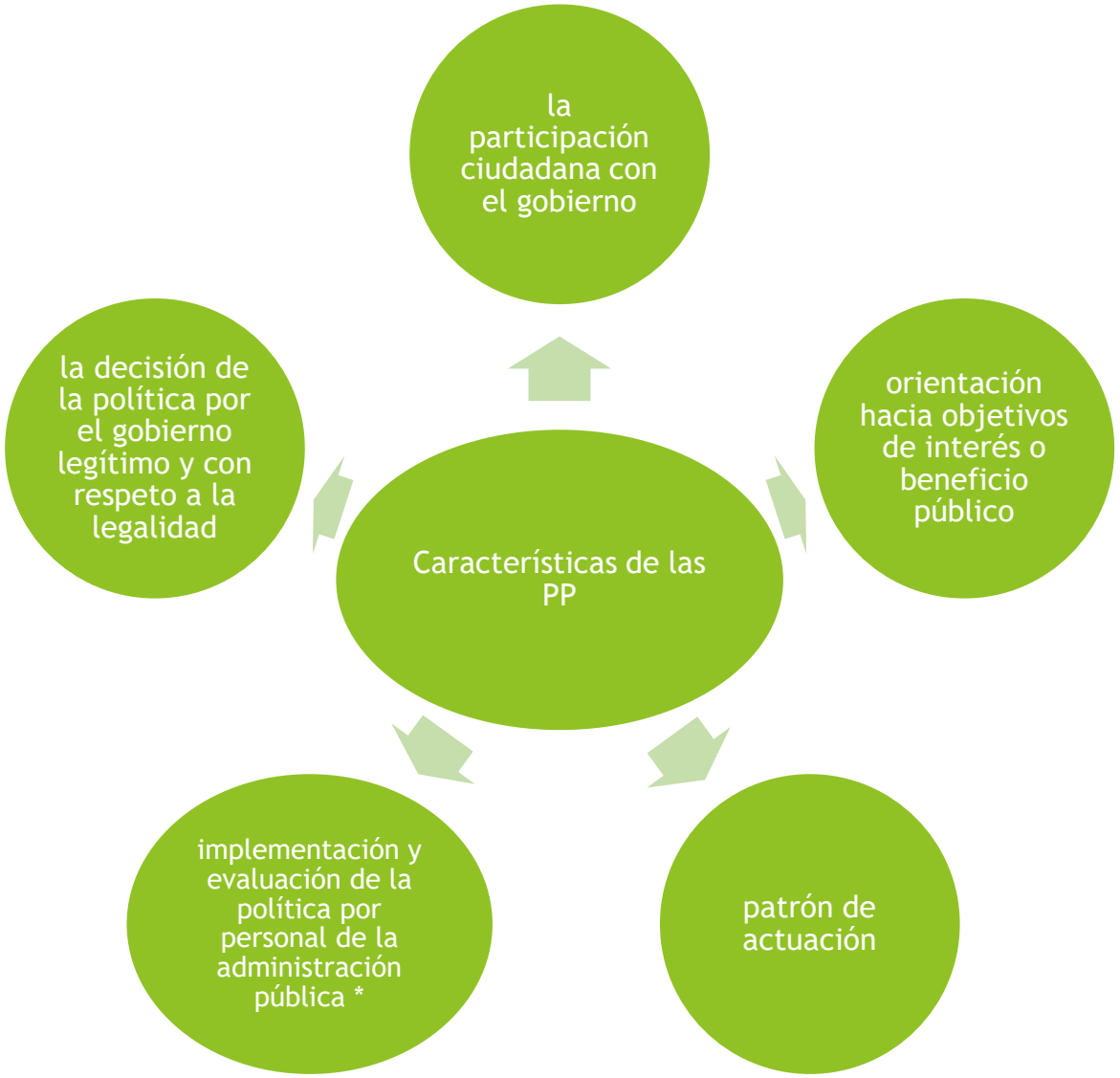
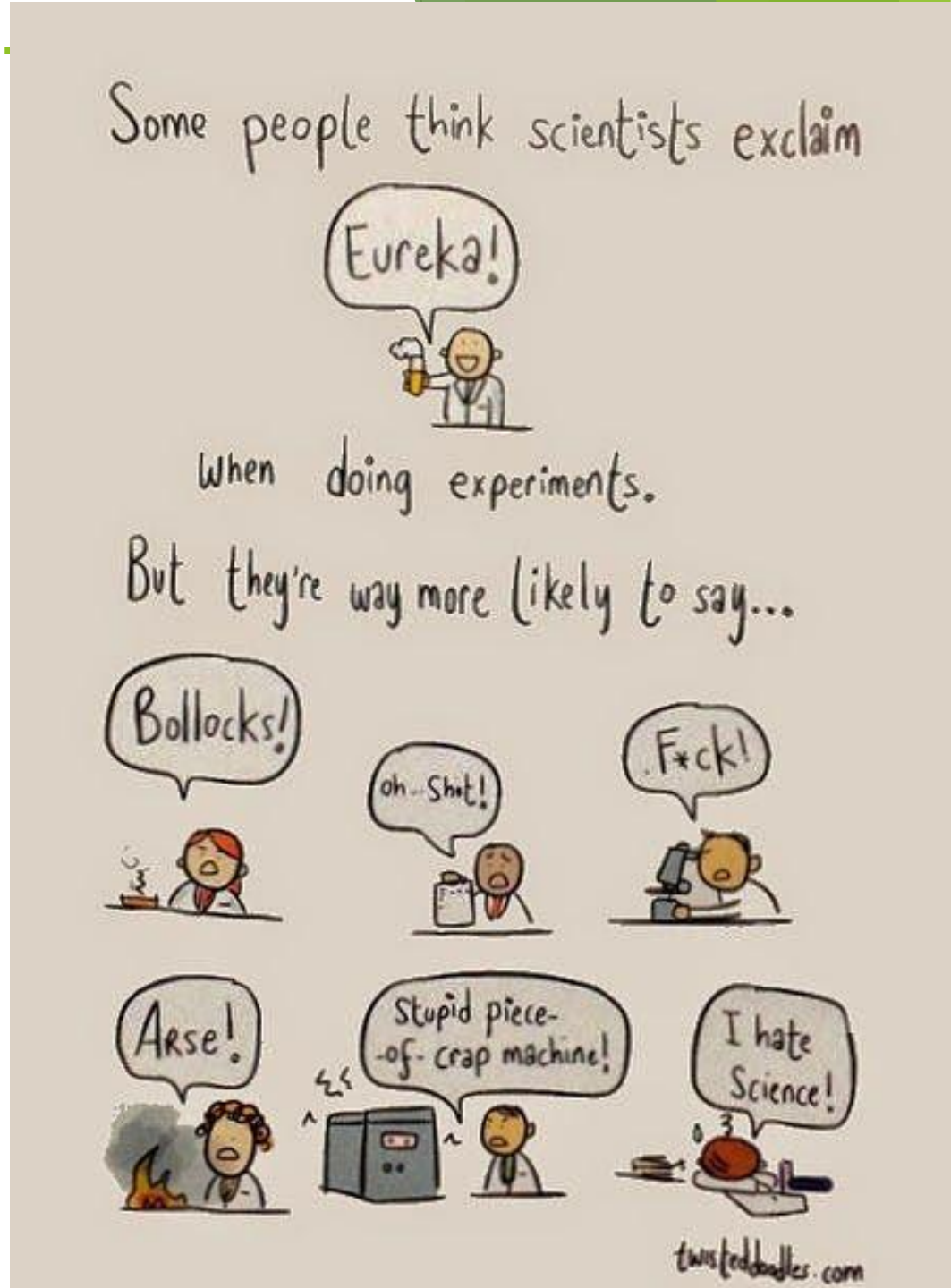
Política pública

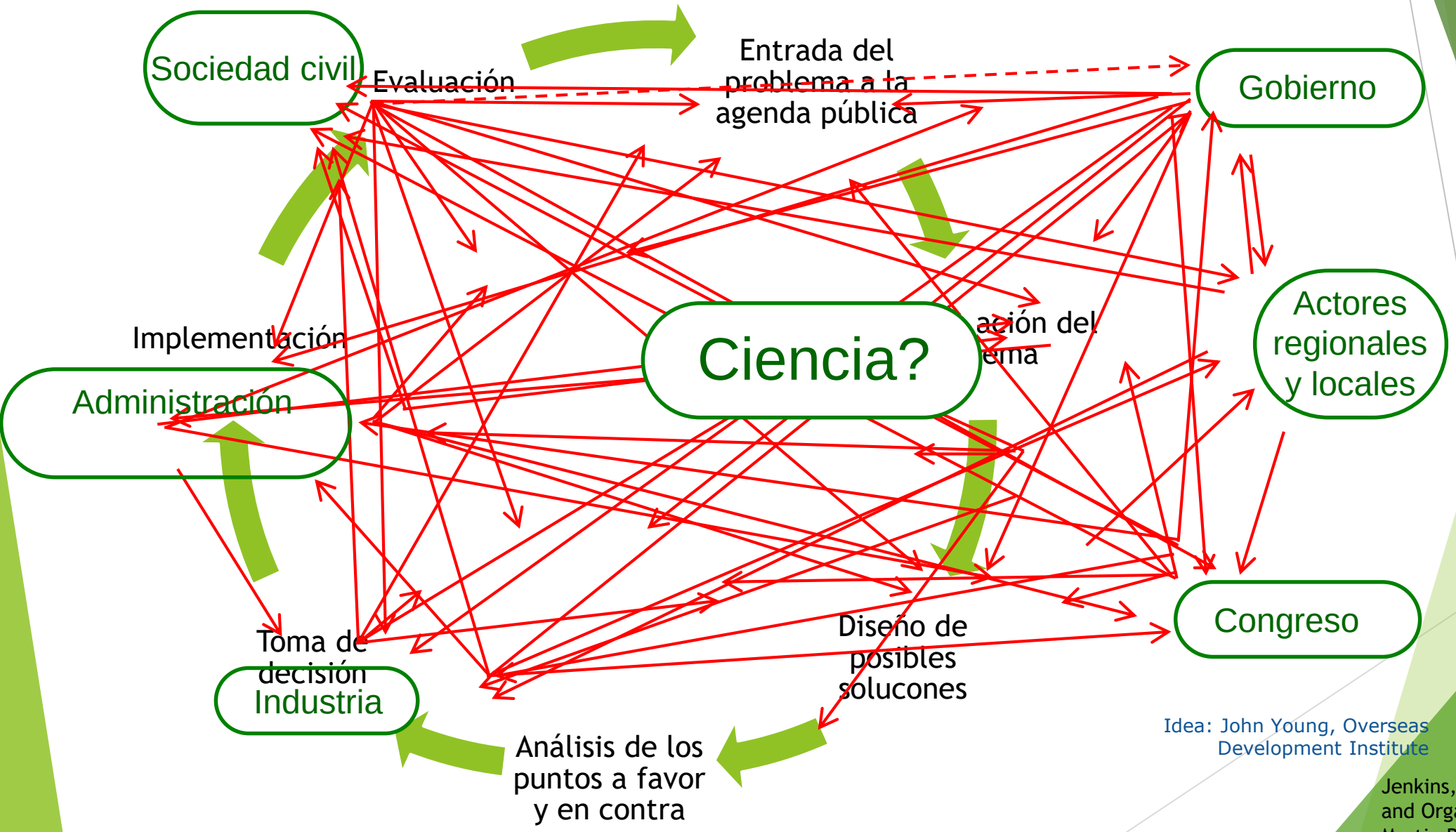


Aguilar F. Luis, 2010. Política Publica. Grupo editorial siglo XXI.

Ciclo de vida de las políticas públ
teoría



Ciclo de vida de las políticas públicas: la realidad



Idea: John Young, Overseas Development Institute

Jenkins, William. Policy Analysis, a Political and Organization Perspective, Inglaterra, Mortin Robertson and Company, 1978, p. 15

Science policy

Top 20 things politicians need to know about science

Oliver Milman

@olliemilman

Wed 20 Nov 2013 17.59 GMT

1870 87

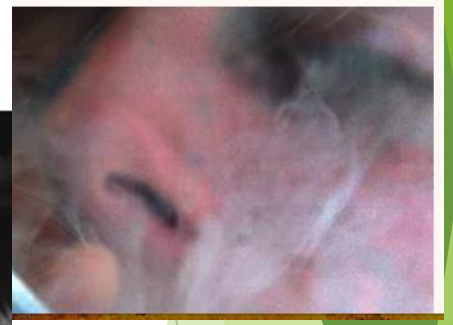
This article is over 4 years old

Science policy

Top 20 things scientists need to know about policy-making

rstanding among scientists
ir policy decisions

ow about science



Political science

Science

12 things policy-makers and scientists should know about the public

Roland Jackson: We've had 20 things politicians need to know about science and 20 things scientists need to know about policy. Where's the rest of society fit into this?

Roland Jackson

Wed 4 Dec 2013 17.32 GMT

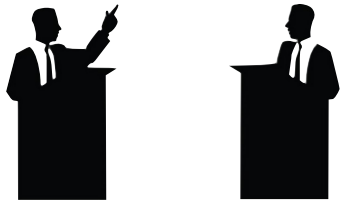
168 44

Interfaz Ciencia-Política

- El termino Interfaz Ciencia-Política (ICP) se refiere a las diversas formas en que los científicos, los responsables de la formulación de políticas y otros se vinculan para comunicarse, intercambiar ideas y desarrollar conjuntamente el conocimiento para enriquecer las políticas y los procesos de toma de decisiones y/o investigación.

Young, J.C., Watt, A.D. van den Hove, S. and the SPIRAL project team1 . 2013. Effective interfaces between science, policy and society: the SPIRAL project handbook. http://www.spiralproject.eu/content/documents

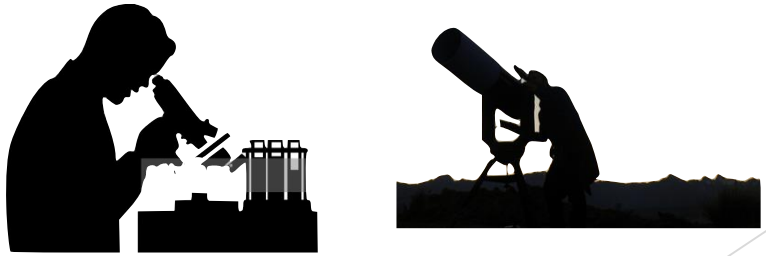
POLÍTICAS



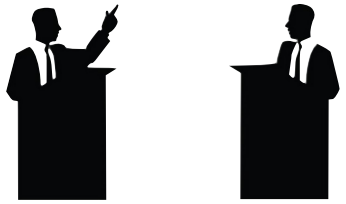
Top-down

Tomadores de decisiones

Comunidad científica/empresarial



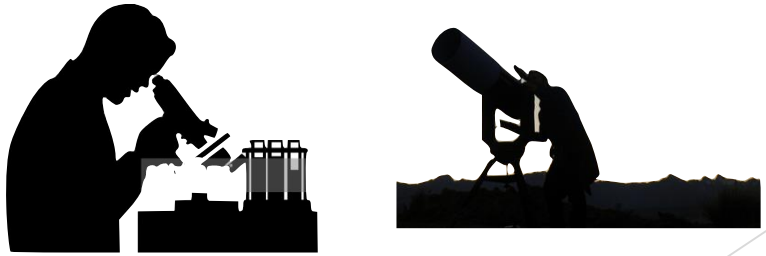
POLÍTICAS



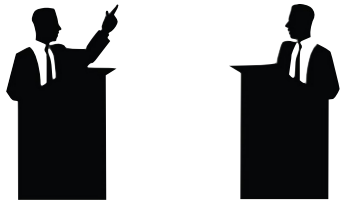
Tomadores de decisiones

Bottom-up

Comunidad científica/empresarial



POLÍTICAS

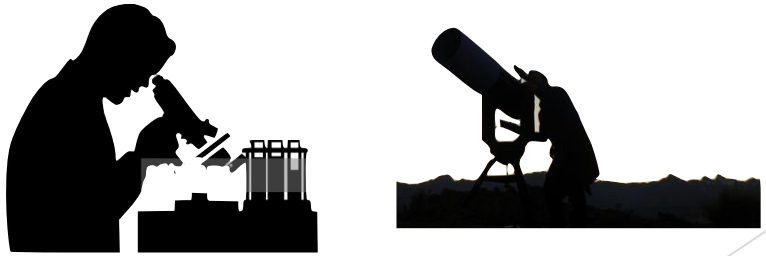


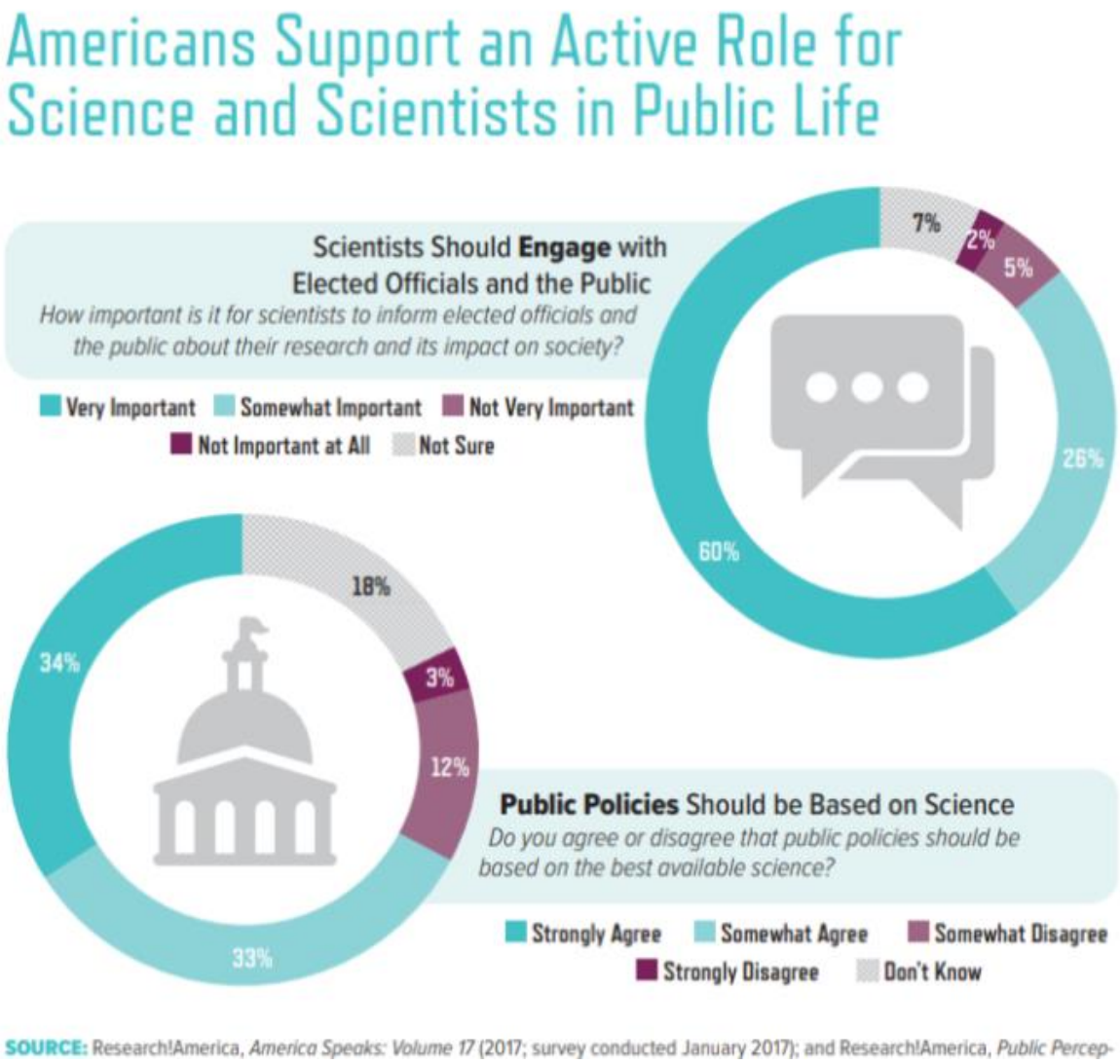
Top-down

Tomadores de decisiones

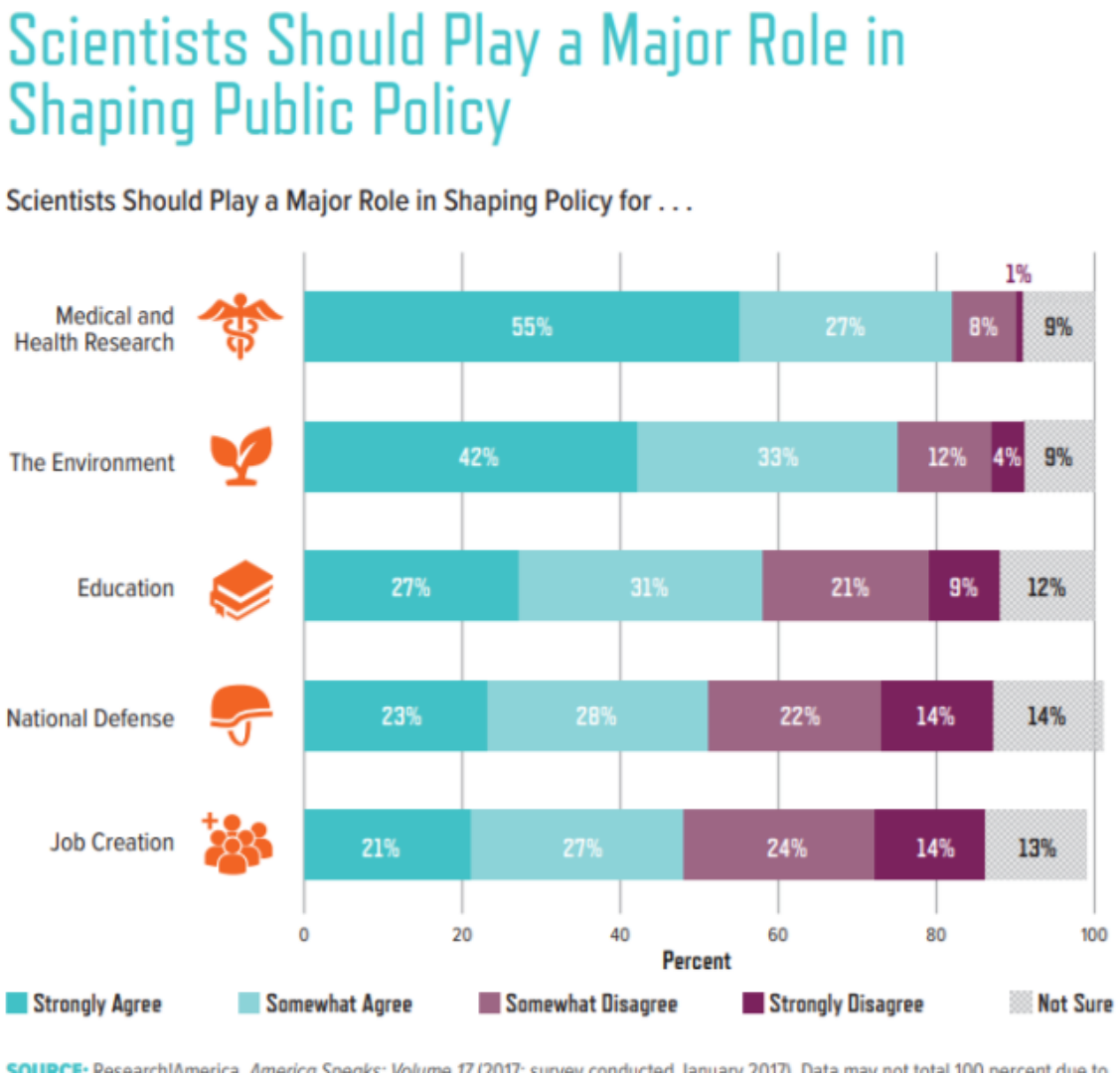
Bottom-up

Comunidad científica/empresarial





¿La Sociedad está lista?



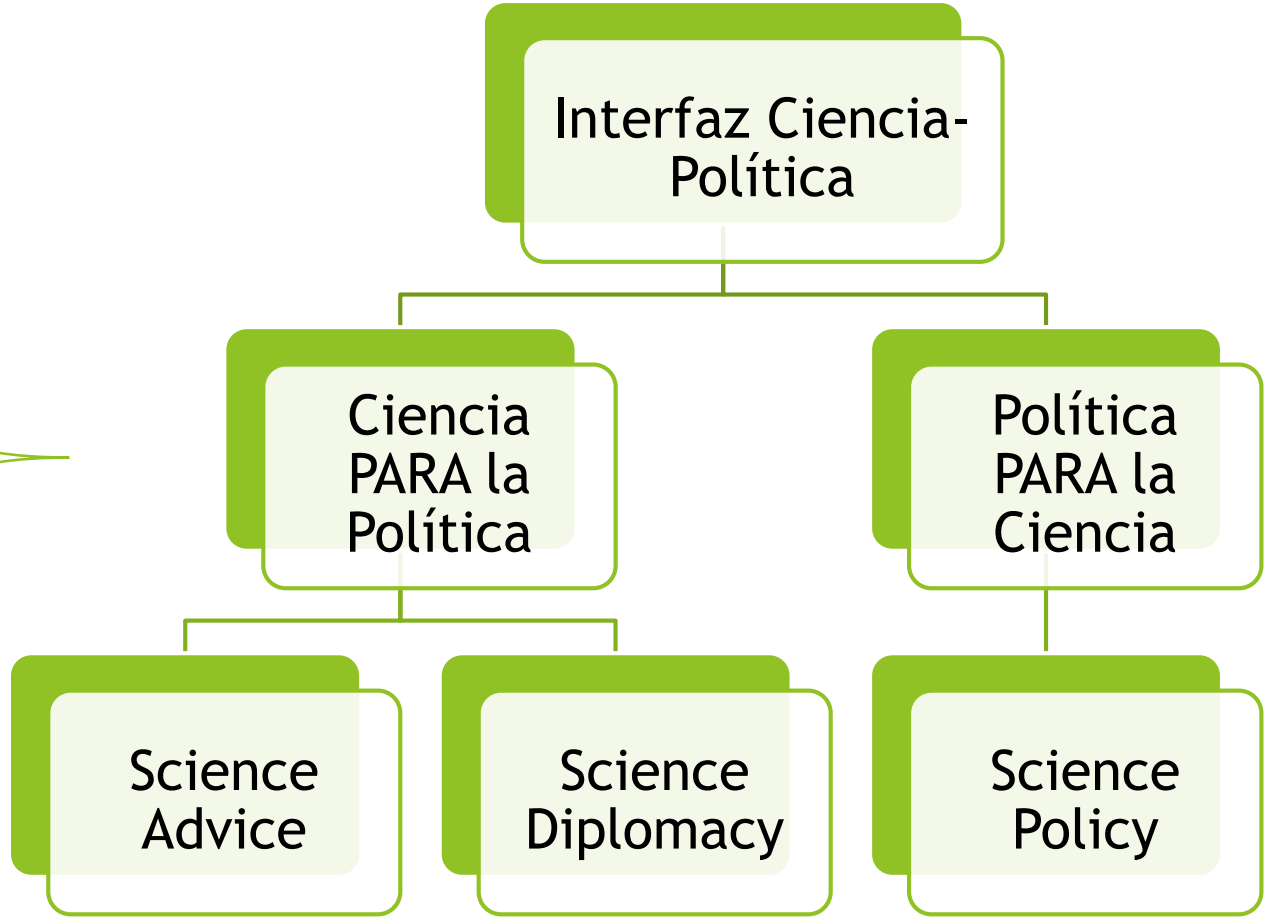
¿Está lista la Academia?

Mapa general

Evidencia

≠

Información



Ciencia para la política

- Parliamentary Office of Science and Technology (POST)
- President's Council of Advisors on Science and Technology
- Información Científica y Tecnológica para el Congreso de la Unión (Incytu)
- Ciencia en el parlamento

Política para la ciencia

- Comisiones legislativas
- Office of Science and Technology Policy (OSTP)
- Fellowship S&T
- Oficina de la Presidencia de la República-CCTI
- Science & Technology Office Tokyo

COMISIÓN DE CIENCIA Y TECNOLOGÍA
LXIII LEGISLATURA H. CÁMARA DE DIPUTADOS

EXECUTIVE OFFICE OF THE PRESIDENT OF THE UNITED STATES
OFFICE OF SCIENCE AND TECHNOLOGY POLICY

Science and Technology Office Seoul


Ultra High Strength Steel
Extra High Strength Steel
Very High Strength Steel
High Strength Steel
Mild Steel / Forming Grades
Aluminium
Magnesium

Científicos

There are many [conferences] - particularly with an academic-style focus, which a lot of them are - I wouldn't even think about going because I would probably be asleep after the opening talk!

Mr N, decision-maker

They [scientists] go ahead and do their project and then try and pull in policy people, and it's too late by then because...well, it might be useful, but it might not.

Mrs K, policy adviser

Mitos SPI

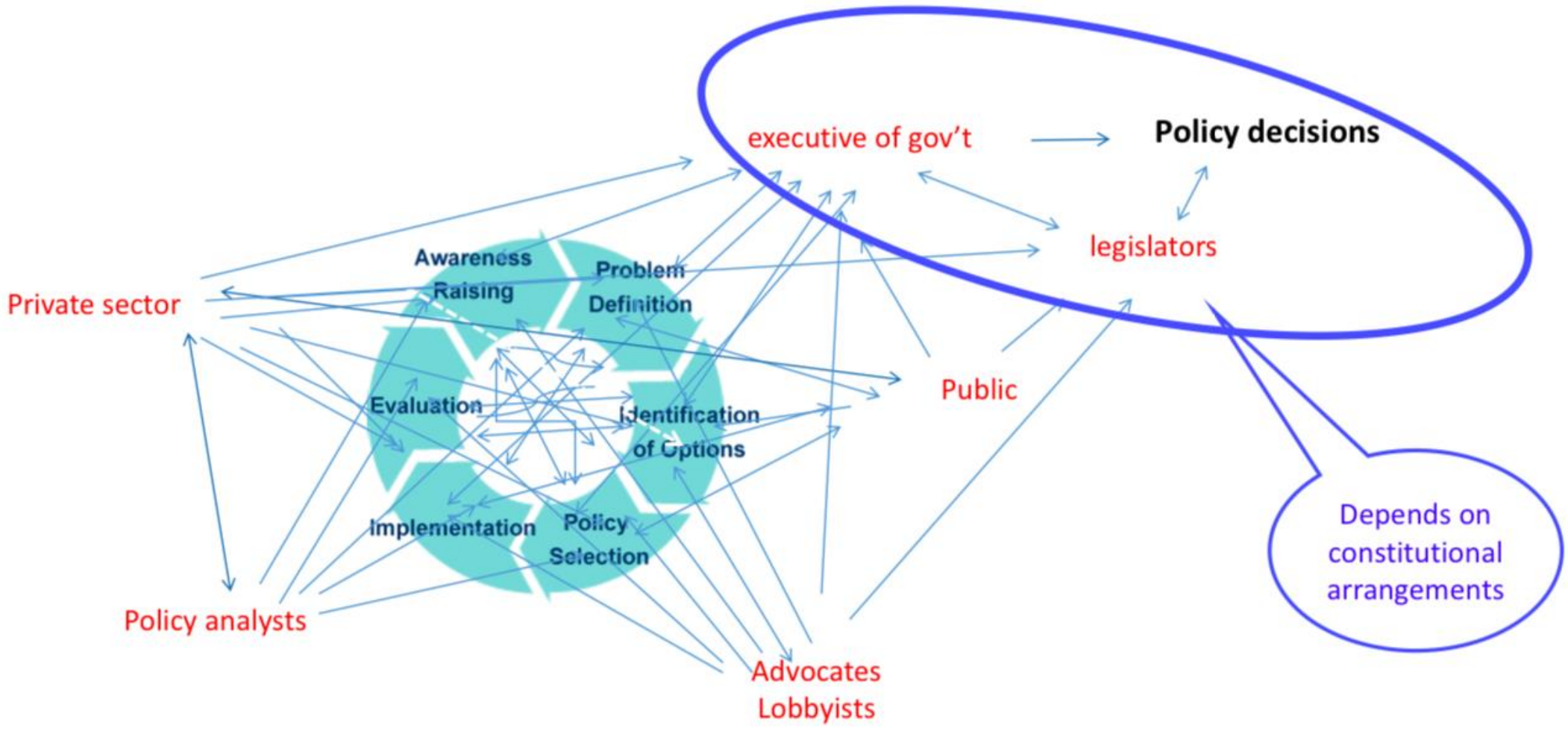
- **Sobre la ciencia:**
- Siempre se pueden establecer relaciones simples de causa y efecto (ciencia determinista).
- Los sistemas complejos se pueden entender y describir completamente.
- La incertidumbre es siempre reducible o cuantificable.

Mitos SPI

- **Sobre Política:**
- Un sistema “X” debe ser completamente entendido antes de tomar decisiones que lo afectan (positiva o negativamente).
- Con suficiente esfuerzo y conocimiento, los sistemas complejos son totalmente controlables.
- Una decisión es el punto final de un proceso lineal de razonamiento que incluye una ponderación neutra de pros y contras y optimización.

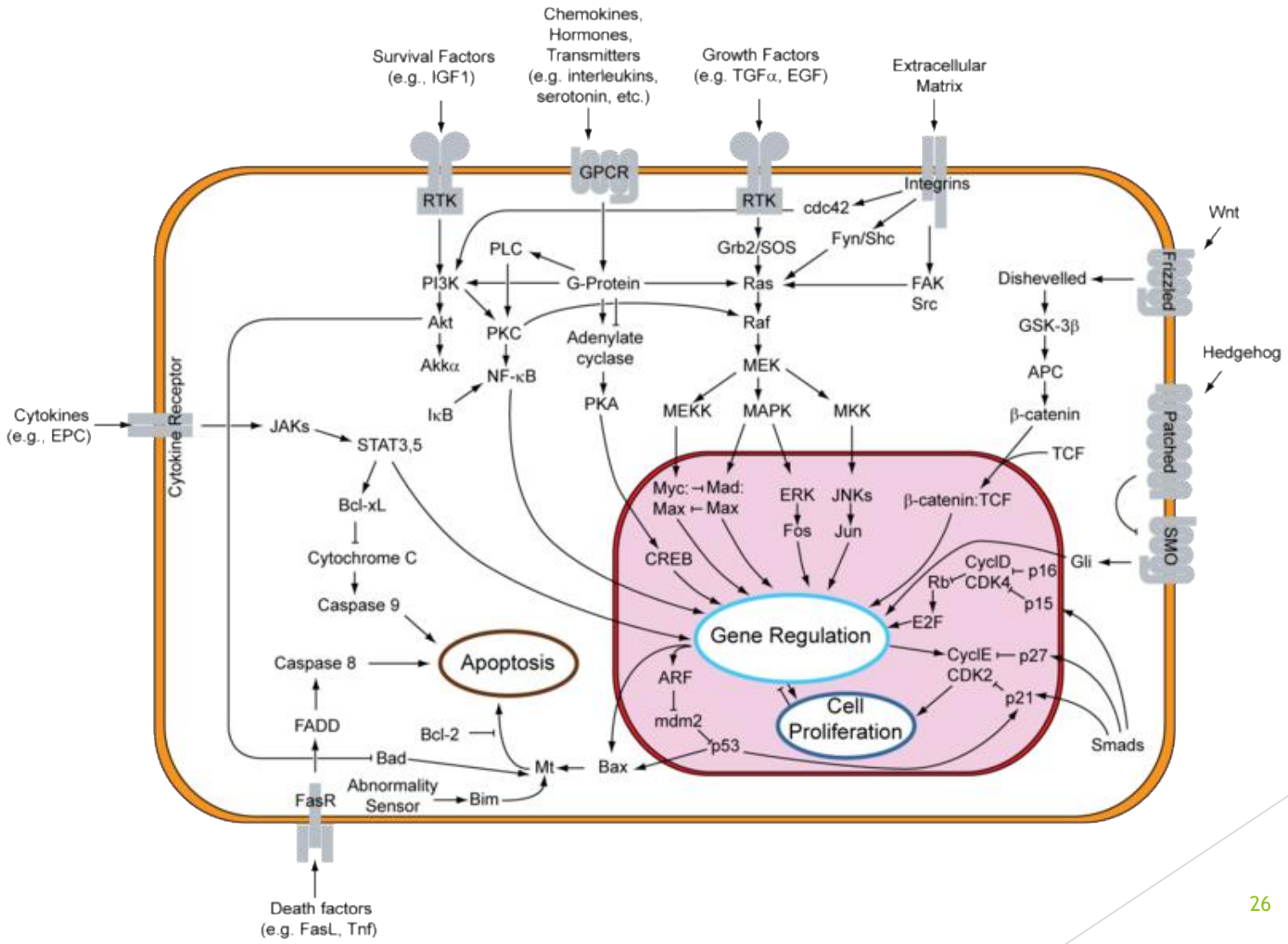
Mitos SPI

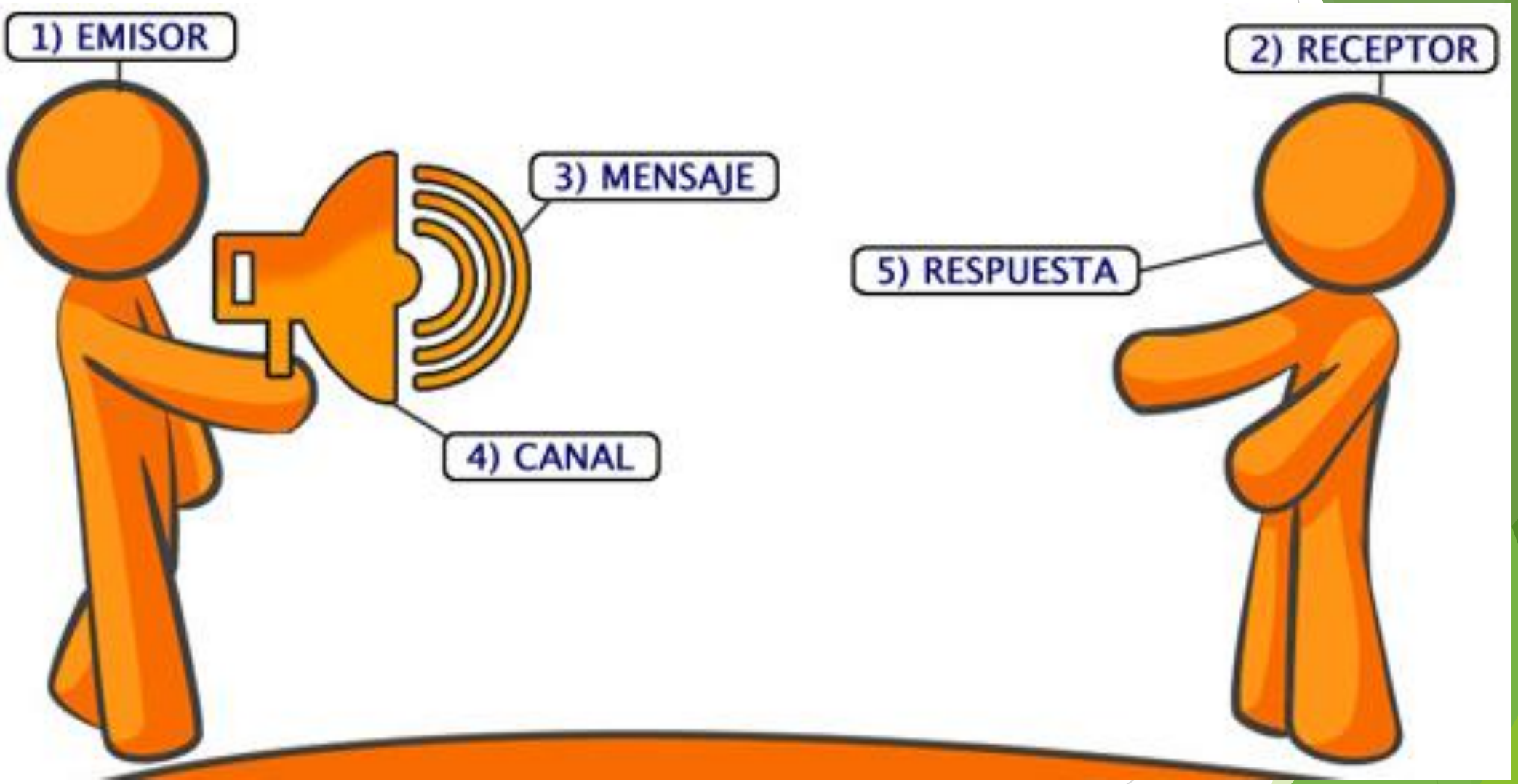
- La ciencia y la política son dos dominios independientes de la actividad humana
- Los SPI se tratan de un flujo unidireccional en el que 'verdad' (ciencia) habla al 'poder' (política)
- Los SPI son foros simples a través de los cuales el informe del conocimiento de la ciencia resulta en el desarrollo de una política basada en la evidencia, de maneras claras y controlables.



Peter Gluckman Kingston 2018

MENSAJES Y RESPUESTAS




1) EMISOR
2) RECEPTOR
3) MENSAJE
4) CANAL
5) RESPUESTA

Hay que utilizar un lenguaje simple e ilustrativo

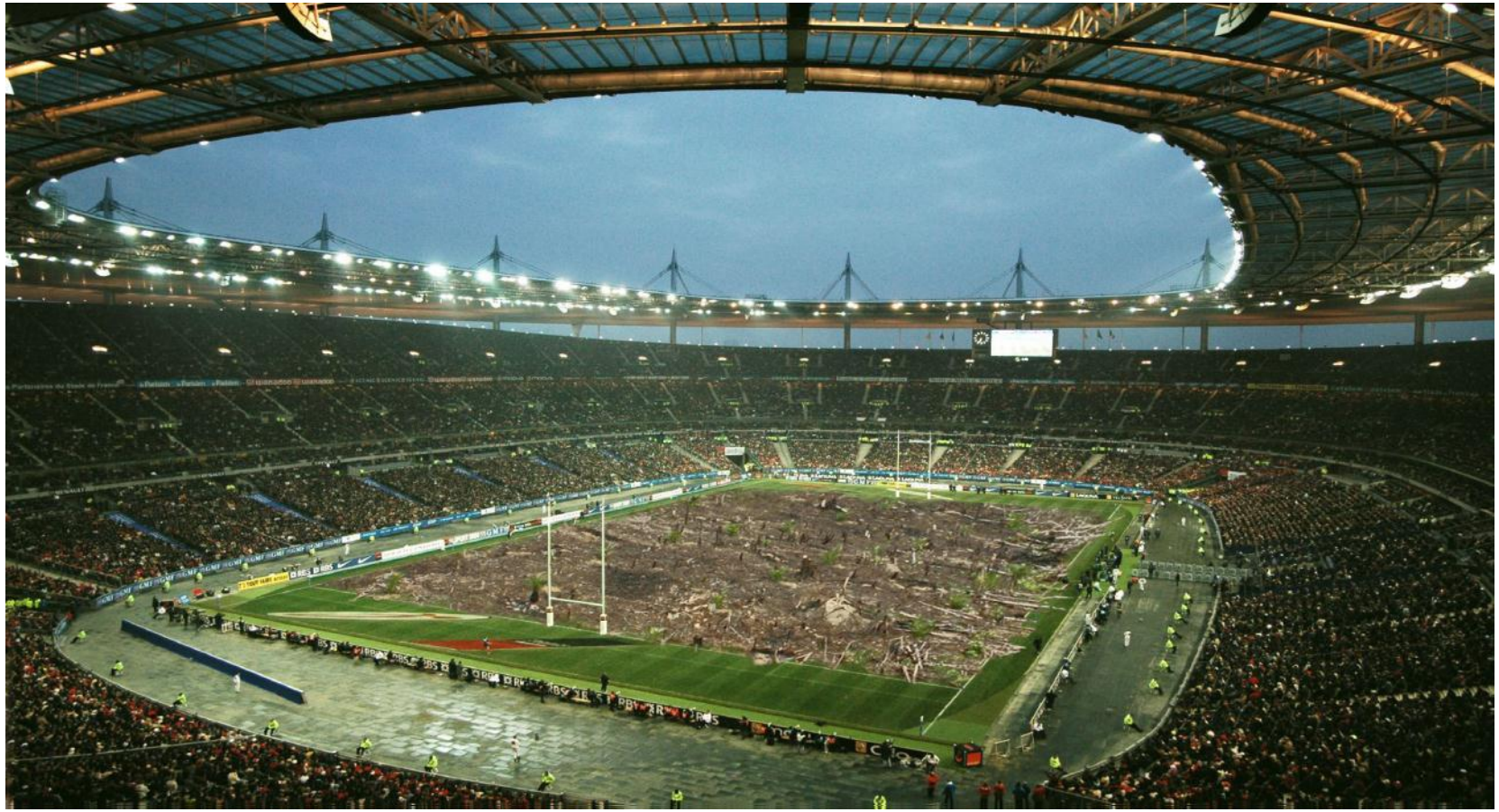


Photo credits: Background Stadium Thomas Faivre-Duboz, forest taken from H.-D. Viktor Boehm (globalcarbonproject), Photo montage by Alan Belward, Joint Research Centre

Fuente: Alan Belward

Esquemas de asesoramiento internos y externos

INTERNO

Comités de asesoramiento científico (permanente
o temporal)

Agencias estatales

Servicios científicos internos

Asesores científicos individuales

EXTERNO

Academias de ciencias y sociedades científicas

Institutos de investigación y universidades

Consultorías científicas y *think tanks*

Estructuras de asesoramiento científico

EXTERNO

a) Academias de ciencias y sociedades científicas
b) Institutos de investigación y universidades
c) Consultorías científicas y *think tanks*
d) Comités de asesoramiento científico (permanente o temporal)
e) Agencias estatales

INTERNO

f) Servicios científicos internos
g) Asesores científicos individuales

Estructuras de asesoramiento científico

IMPORTANTE:

- Todos las estructuras son válidas.
- No hay estructura ideal, así que en realidad siempre se encuentra una mezcla de varios tipos
- Cada tipo tiene sus ventajas y desventajas, dependiendo del problema que hay que solucionar (técnico vs. ”filosófico“)
- El punto de ”primera llamada“ depende de forma significativa de las tradiciones institucionales y culturales, tanto en el sistema científico como político (e incluso depende de las relaciones personales).

a) Academias de ciencias y sociedades científicas, b) Institutos de investigación y universidades

Descripción:

Instituciones cuyos miembros son académicos individuales elegidos con base en sus logros científicos.

Ventajas:

- Acceso a los mejores académicos del país
- Alta reputación (también en la opinion pública)
- Control de calidad estricto

Desventajas:

- Un poco alejados de la política
- Los informes a veces son difíciles de entender (lenguaje científico)
- Estudios demoran (> 1 año)
- Se requiere una convocatoria, proyectos pueden demorar
- Los resultados no reflejan necesariamente la opinión de la mayoría de los científicos
- Los informes terminan en: “Se necesitan más estudios”

c) Consultorías científicas y *think tanks*

Descripción:

Entidades de asesoramiento político-científico de carácter privado o semi-privado.

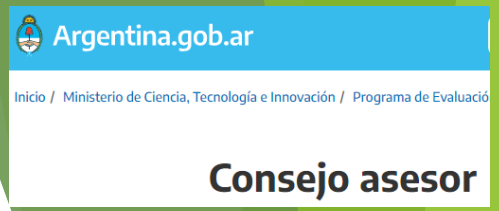
Ventajas:

- Buen entendimiento de los procesos politicos
- Respuesta rápida y a tiempo
- Presentes en la capital

Desventajas:

- No siempre de alta calidad científica
- Agendas secundarias (p.ej. financiados por partidos)
- Tendencia de confirmar la opinión de los clientes

d) Comités de asesoramiento científico (permanente o temporal)



Descripción:

Comités científicos independientes que tienen el mandato de asesorar al gobierno sobre temas específicos, de forma permanente o temporal.

CONSEJO CONSULTIVO DE CIENCIAS

Ventajas:

- Una forma más o menos rápida y de bajo costo para obtener la opinión de expertos sobre un tema
- Pueden servir para explorar ideas

Desventajas:

- Se reúnen de vez en cuando
- Recursos limitados

e) Agencias estatales

Descripción:

Entidades que tienen un mandato legal para implementar políticas (p.ej. colección de datos, monitoreo, asesora-miento de riesgos, certificaciones, accreditación).

Ventajas:

- Tienen que actuar cuando el gobierno lo pide
- Tienen especialistas altamente calificados
- Dueños de datos y estadísticas oficiales
- Confianza de los ciudadanos

Desventajas:

- Muy técnicos
- Necesidad de cumplir con procesos burocráticos

INEGI
INSTITUTO NACIONAL DE ESTADÍSTICA Y GEOGRAFÍA

indec
Instituto Nacional de Estadística y Censos
República Argentina

f) Servicios científicos internos

Descripción:

Una entidad de investigación científica dentro del gobierno (p.ej. unidad de investigación dentro de un ministerio).

Ventajas:

- Posibilidad de compartir documentos confidenciales
- Buen entendimiento de lo que se necesita
- Cubren todo el ciclo político
- Entregan los trabajos a tiempo

European Commission

The European Commission's science and knowledge service

Joint Research Centre

Desventajas:

- Reaccionan a necesidades especificas, a menos que haya una estructura claramente conformada.
- No siempre pasan mensajes inconvenientes abiertamente

g) Asesores científicos individuales (p.ej. *Chief Scientific Advisors*)

Descripción:

Un asesor científico individual empleado por el gobierno para asesorar al Presidente / Primer Ministro o a un Ministro.

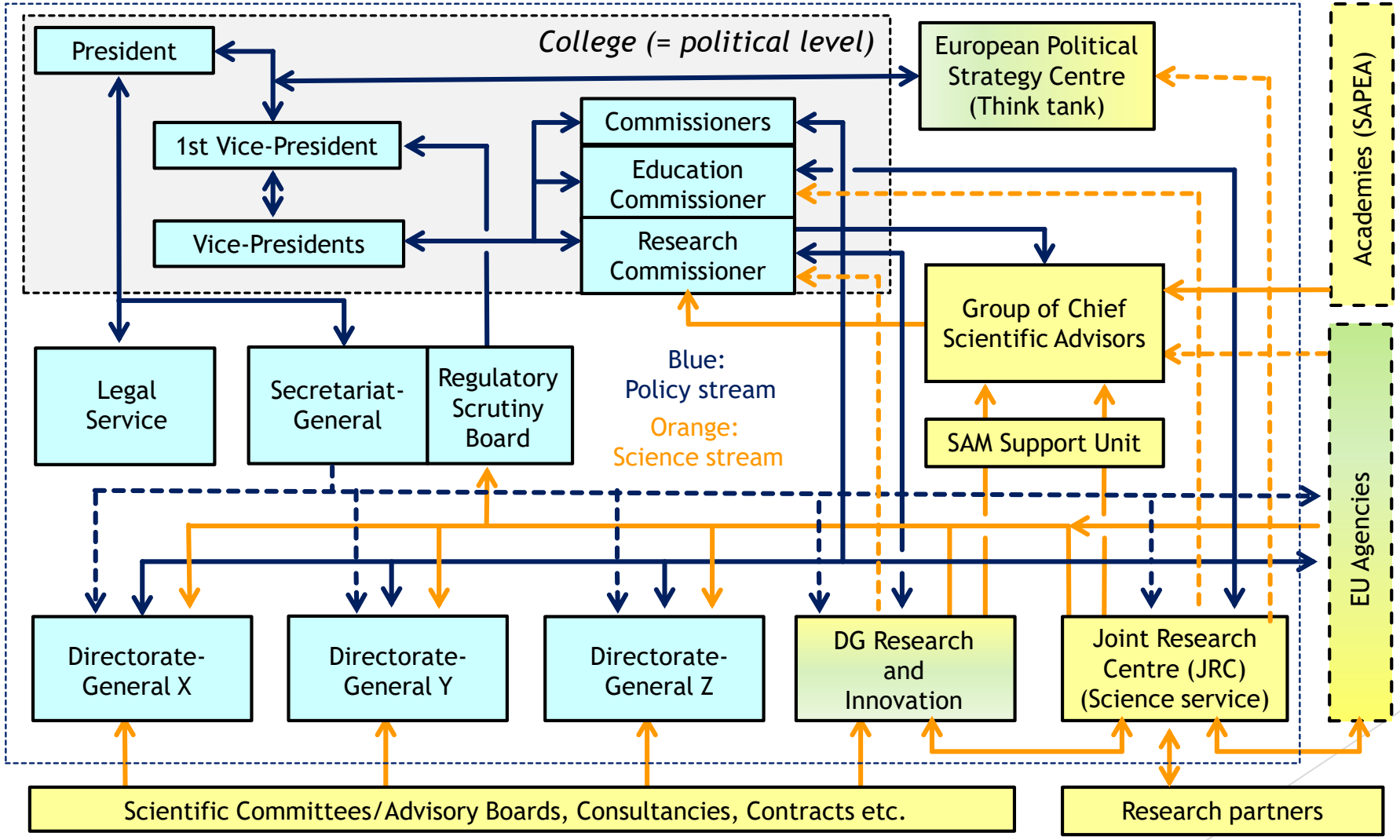
Ventajas:

- Teléfono único para llamar
- Disponible 24/7, puede responder inmediatamente (p.ej. en caso de crisis)
- Se ubica en el mismo edificio / a pocas cuadras
- Puede asesorar de forma confidencial / oral (“*La cancillería me envió este documento – ¿podría echar un vi si esto tiene sentido desde un punto de vista científico?*”)

Desventajas:

- No es experto en todas las materias (pero sabe a quién preguntar)

El ecosistema de asesoramiento científico de la Comisión Europea



Design: Jan Marco Müller

What Kind of Scientist Could I Be?

You might think that a scientist is a person in a white lab coat who spends their life peering down a microscope, but there are many different sorts of career in science, technology, engineering and maths.

The Communicator
Combining science and technology expertise with an understanding of their audience's needs, Communicators tell the world about the amazing work scientists do. They work in areas like TV, advertising, regulation and public affairs.

The Developer
Developers transform other people's discoveries into something practical. They enjoy solving problems and often work on creating new products or services, developing new technologies or applying existing knowledge to new situations.

The Entrepreneur
Entrepreneurs use scientific inventions to make money and create jobs for other people. Their scientific and business knowledge and entrepreneurial flair allow them to see opportunities for innovation.

The Explorer
Boldly going where no one has gone before, Explorers are on a journey of scientific discovery. They bring a fresh, creative approach to research, and are happy taking risks. It's hard to predict what they might find, and that's half the fun!

The Investigator
Investigators piece together bits of information to map out the scientific landscape so that others can more easily find their way. They are good at seeing connections between ideas, and often work in a team.

The Service Provider
Service Providers work in special laboratories, carrying out key scientific tasks like testing or setting up experiments. They are essential in areas such as the health service, investigating crimes and food science, as well as in research and education.

The Policy Maker
Policy Makers use their science knowledge to ensure that the law and government policy are based on sound evidence. They need strong communication, people and negotiation skills, and must be able to make difficult decisions.

The Professional
Professionals with excellent science and technology skills are in huge demand across all industries, not just in the obvious industries like pharmaceuticals or IT, but also in marketing, product development, finance and insurance.

The Regulator
Regulators make sure that science and technology are practised safely. They must communicate well with the public and other scientists, building trust and confidence. For example, Regulators check that our food is safe to eat.

The Teacher
Trained in science, Teachers use their passion for their subject to inspire students. Working in and with schools, colleges, universities, they pass on their knowledge and enthusiasm and help to develop tools for teaching and learning.

Want to be a Scientist?

If you like the sound of any of these kinds of careers, talk to your teacher about which subjects will help you become a scientist.

Produced by Ada Lovelace Day:
www.findingada.com or @findingada

Based on the Science Council's Ten Types Of Scientist:
www.sciencecouncil.org/10-types-scientist

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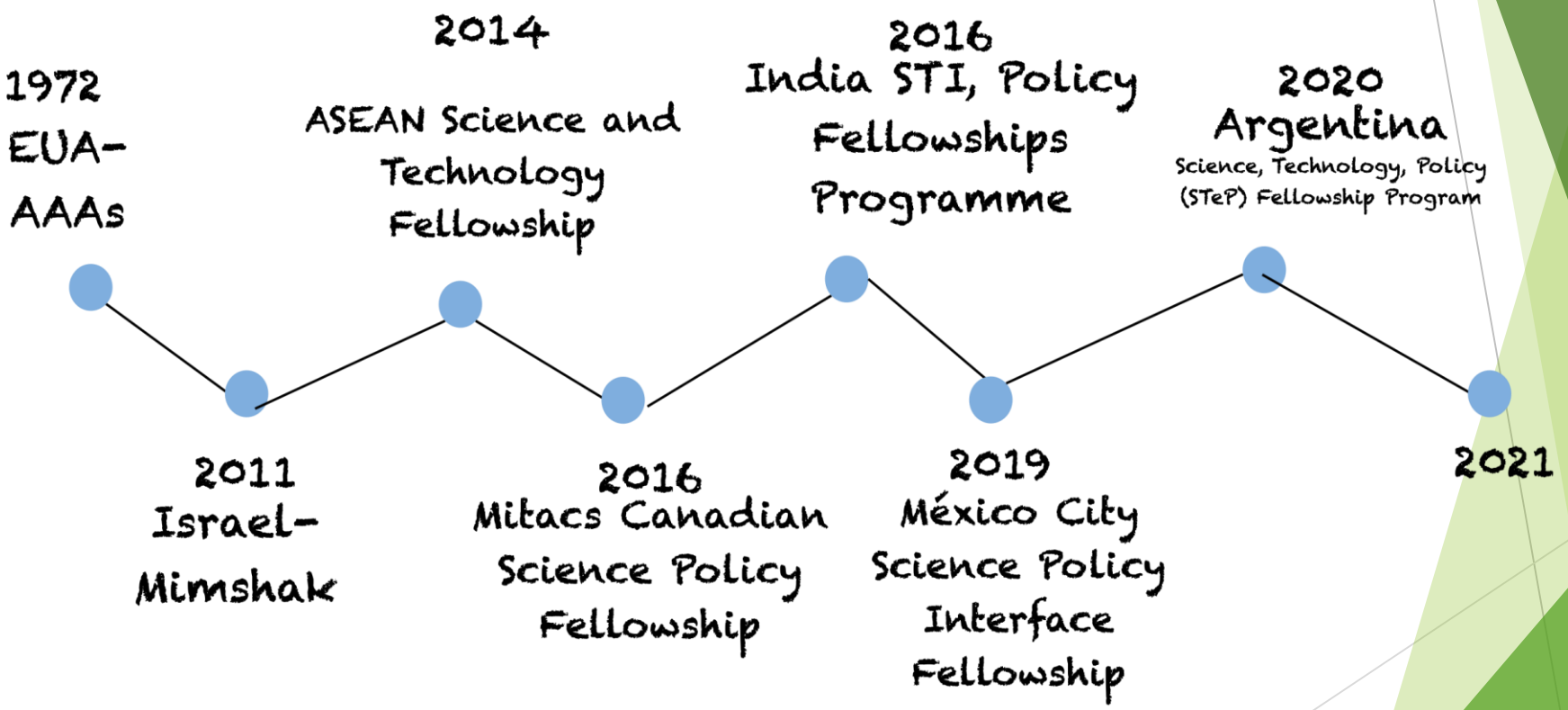
How to deal with…

- Being right is not enough
- Don not underestimate your counterparts
- Advice vs advocate
- Executive vs legislative power
- Be accurate but avoid technicisms
- Science in the policy making and policy evaluation
- Connect internationally
- Academia vs Policy Arena
- Frustration

Training programs on Science Policy Interface



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GW Elliott School of International Affairs

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Home ▸ Faculty

Faculty

Our distinguished faculty comprises leading scholars and policy practitioners who bring an impressive range of expertise and experience to the study and practice of international affairs. Faculty members represent disciplines that include anthropology, economics, geography, history, international business and finance, international development studies, international science and technology policy, political science, public health, security policy, and world religions. All faculty members are affiliated with one or more of our 11 research institutes or centers.

About | Academics | Admissions | Current Students | Faculty | Research

10
10 Endowed Faculty

50%+
More than 50% of Faculty have served in Government or International Organizations

1,400+
Faculty have been mentioned in the news over 1,400 times in 2016-17

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Consortium for Science, Policy & Outcomes

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BELFER CENTER
for Science and International Affairs

Research | Experts | Programs & Projects | Fellowships | Events

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PROGRAM

Science, Technology, and Public Policy

The Science, Technology, and Public Policy Program (STPP) applies methods drawn from technology assessment, political science, economics, management, and law to study problems where science, technology, and policy intersect. Our goal is to develop and promote policies that expand the contribution of science and technology to human welfare.

Overview | Research (2829) | Experts (49) | Projects (2) | Fellowships (6) | Events (879)

- About
- Directors' Message
- People
- Contacts

About

The Science, Technology, and Public Policy Program (STPP) is a research, teaching, and outreach program of the Belfer Center for Science and International Affairs. Solutions to many of the world's most challenging problems involve compl
in these areas requires access to the fronti
information, but to bring an appreciation f
understanding, blending scientific insight
economics and politics. From the nuclear r

MIT Science Impact Collaborative
Harmonizing Science, Politics, and Policy

ABOUT | PROJECTS | RESOURCES | TOOLS | PEOPLE | NEWS

UCL Home | Prospective students | Current students | Staff | Give | Search UCL websites, degrees, short courses, peopl | Go

UCL DEPARTMENT OF SCIENCE, TECHNOLOGY, ENGINEERING AND PUBLIC POLICY

UCL

Home | About | People | Research | Study | Professional education | News and events | How to Change the World | Contact us | News DPL

UCL Home / UCL STEaPP

UCL Department of Science, Technology, Engineering and Public Policy (STEaPP) mobilises science, technology, engineering and policy expertise to help change the world for the better.

STEaPP
Applied in Focus. Global in Reach.

Study | Research | Professional education

ABOUT

e Massachusetts Institute of Technology Science Impact Collaborative (MIT SIC) is a research team
thin the Department of Urban Studies and Planning that is developing and testing new ways to
rmonize science, politics and public policy in the management of natural resources and the resolution
environmental disputes. Our focus is on testing the effectiveness of a range of collaborative planning
d decision-making techniques. Our tools and approaches include collaborative adaptive management,

¿Qué/Dónde se ha hecho?

Universidad de Buenos Aires
Facultad de Ciencias Económicas
Escuela de Estudios de Posgrado

OFERTA ACADÉMICA ¿CÓMO POSTULARSE? ALUMNOS NOVEDADES

SP SECTOR PÚBLICO

Política y Gestión de la Cien

Maestría en Política y Gestión de la Cien

Categorizada "B" (Muy Buena) CONEAU - Res. 113/12

PERFIL DEL GRADUADO PLAN DE ESTUDIOS CUERPO DOCENTE

Proporcionar formación académica apta para el desarrollo de creación, docencia y ejecución en el área de la política d tecnología y la gestión tecnológica en el ámbito público especial énfasis en la comprensión de las relaciones tecnología, sociedad y economía.

Título: *"Magister de la Universidad de Buenos Aires en Políti la Ciencia y la Tecnología"*

OBJETIVOS

- Desarrollar capacidad en el área de la comprensión de las desarrollo social, político, económico y cultural del hombre.

Institute of Geosciences

UNICAMP

Institutional Community Undergraduate Graduate Research Culture and Extension Communication

Home > Graduate > Science and Technology Policy

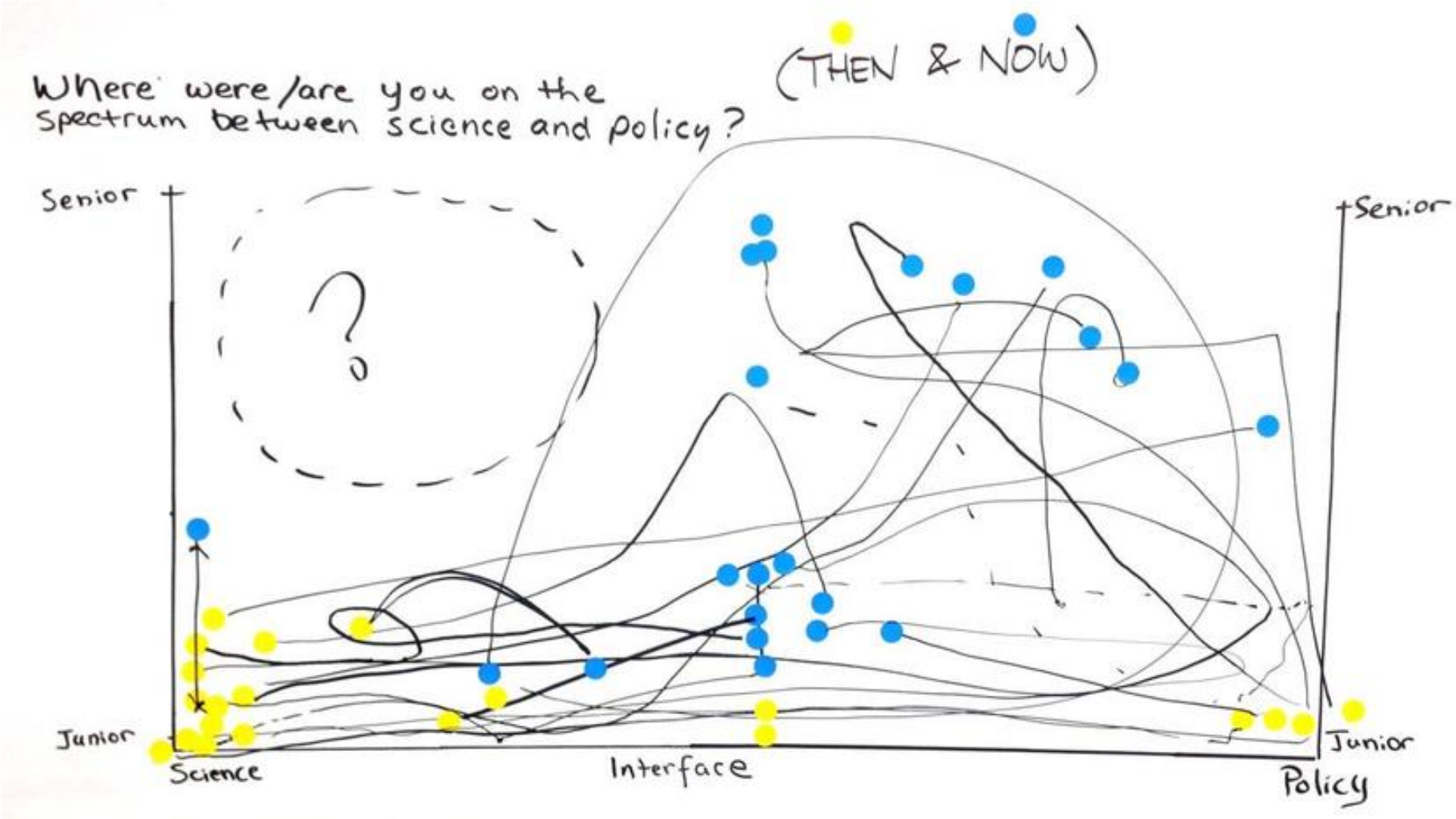
Graduate

- Overview
- Programmes
  - Teaching and History of Earth Sciences
  - Geosciences
  - Geography
  - Science and Technology Policy
    - Admission
    - Regulations
    - Lines of Research
    - Credits and Mandatory Disciplines
- Regulations and Catalogues
- Student Entities
- Grants

Science and Technology Policy

The Graduate Programme in Science and Technology Policy (PPG-PCT) places an interdisciplinary focus on studies in Science, Technology and Innovation (CT&I). Hence, it consists of a number of disciplinary approaches on the generation and use of knowledge, economic and social appropriation of knowledge, economic and social restraints and implications of this process.

Interfaz Ciencia-Políticas



Top 5 Management Incentivesto Improvethe Science/Policy Interface. Workshop Results
Ottawa Science Policy Roundtable
Michael Bordt and Marc Saner, 2014

European Commission

Snapshot of the Evidence Informed Policy Landscape

The ecosystem of evidence informed policymaking has seen a flurry of activity recently. This infographic is an attempt to capture all key organisations which work to advance evidence informed policy conceptually and practically. This is a record of the thinkers about evidence and policy and not neccesarily of all the do-ers, although these worlds often overlap.

Click on any name to visit their homepage for more info
Click here for a complete twitter list of all accounts mentioned in this infographic

National Government advisors

- No official advisor
- Chief Scientific Advisor
- Scientific Advisory Board
- National Academies as advisors
- Gov Institutes/Agencies as advisors

*country with a pluralist advice system; here we highlight the most prominent body within each government.

Research Institutes

- Rathenau Institute @RathenauORG
- Mercator Research Institute
- STEaPP and EPPI centres, University College London @UCLSTEaPP @EPPICentre
- Centre for

NGOs, Think Tanks

- Cochrane @cochranecolab
- Campbell

Academic Networks

- International Council for Science @ICSUnews
- International Social Sciences Council

International Bodies

- EU Agencies Network for Scientific Advice
- Science Advice Mechnism, European Commission @EUScienceInnov
- Joint Research Centre

Fora

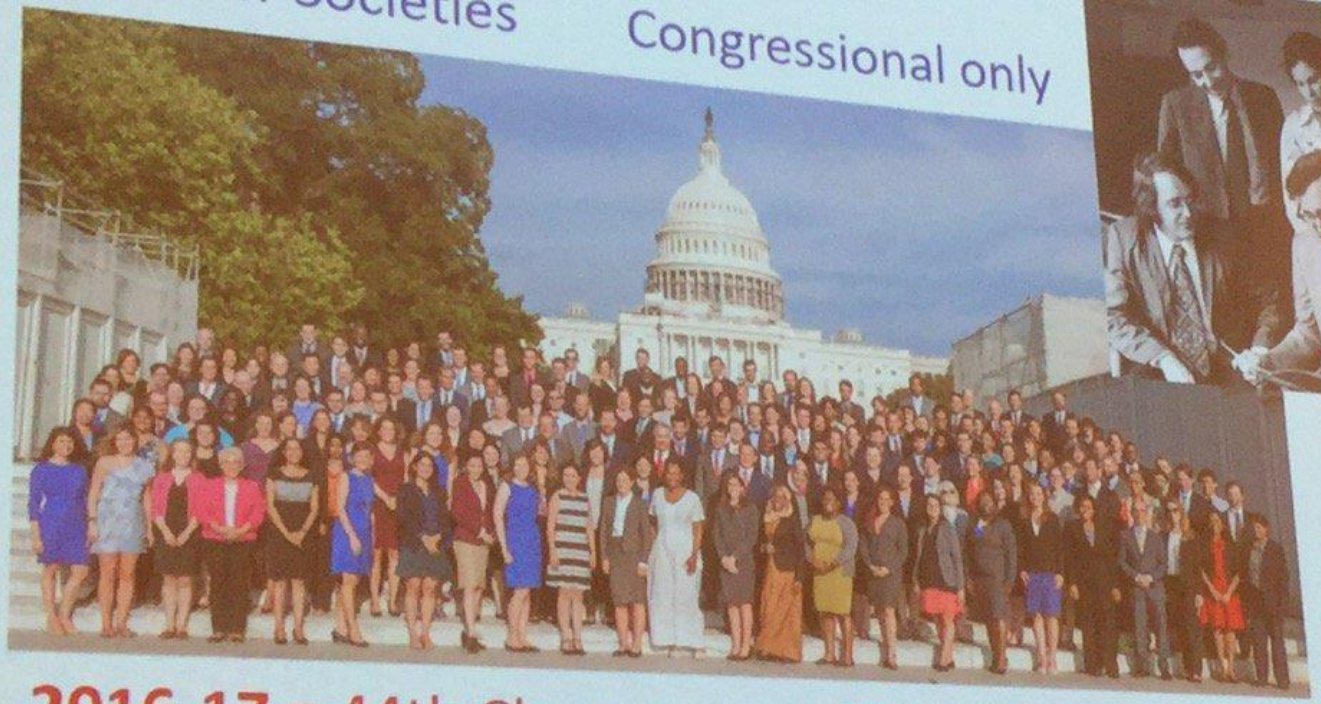
- INGSA conference
- AAAS meeting @AAASmeetings
- STS Forum
- EuroScience Open Forum @ESOF_eu
- World Science Forum
- CILAC Forum

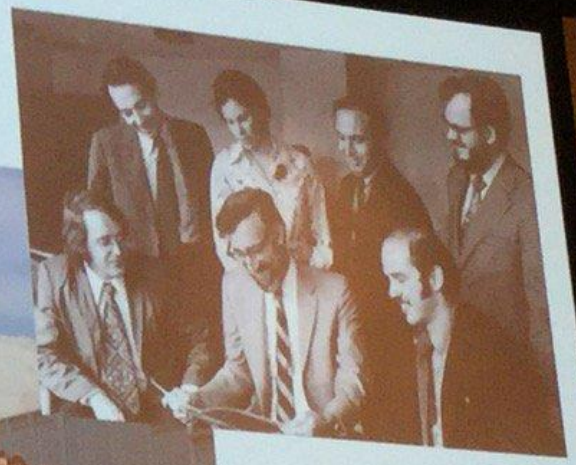
1973-74 = 1st class

4 Partner Societies

N=7

Congressional only





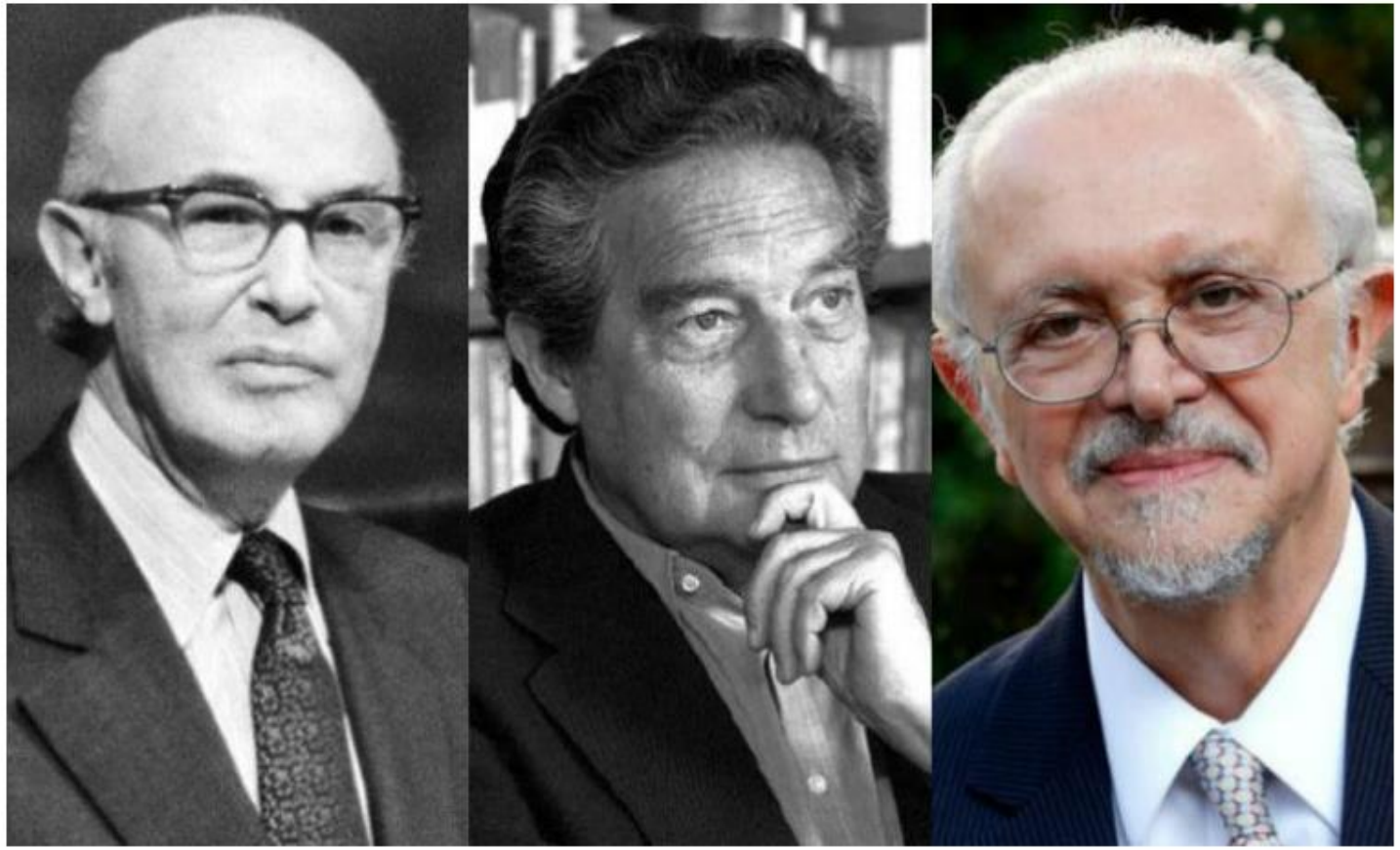
2016-17 = 44th Class

28 Sponsoring Societies

261 Year-long fellows

19 Executive Branch Agencies

AAAS



Opción A

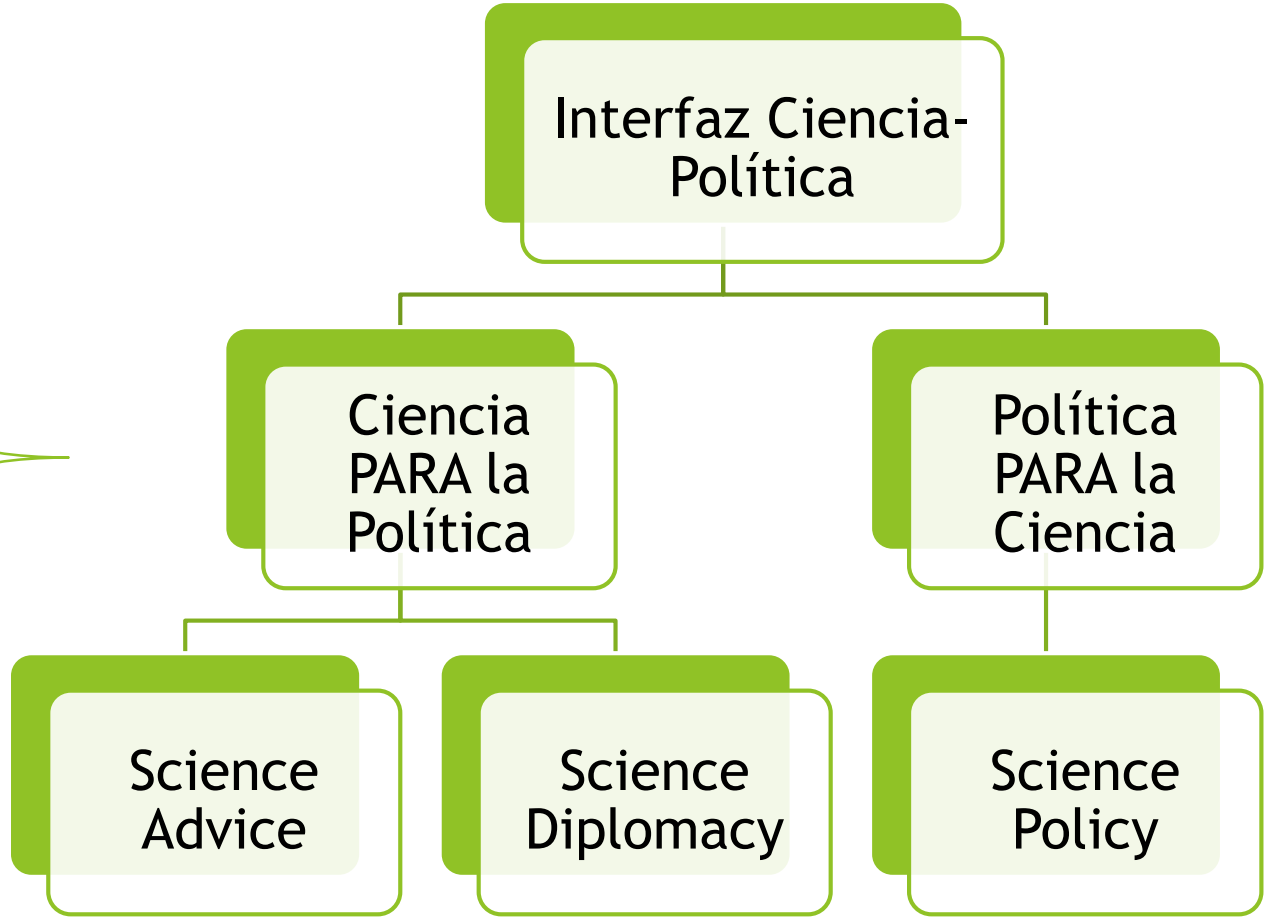
Opción B

Mapa general

Evidencia

≠

Información

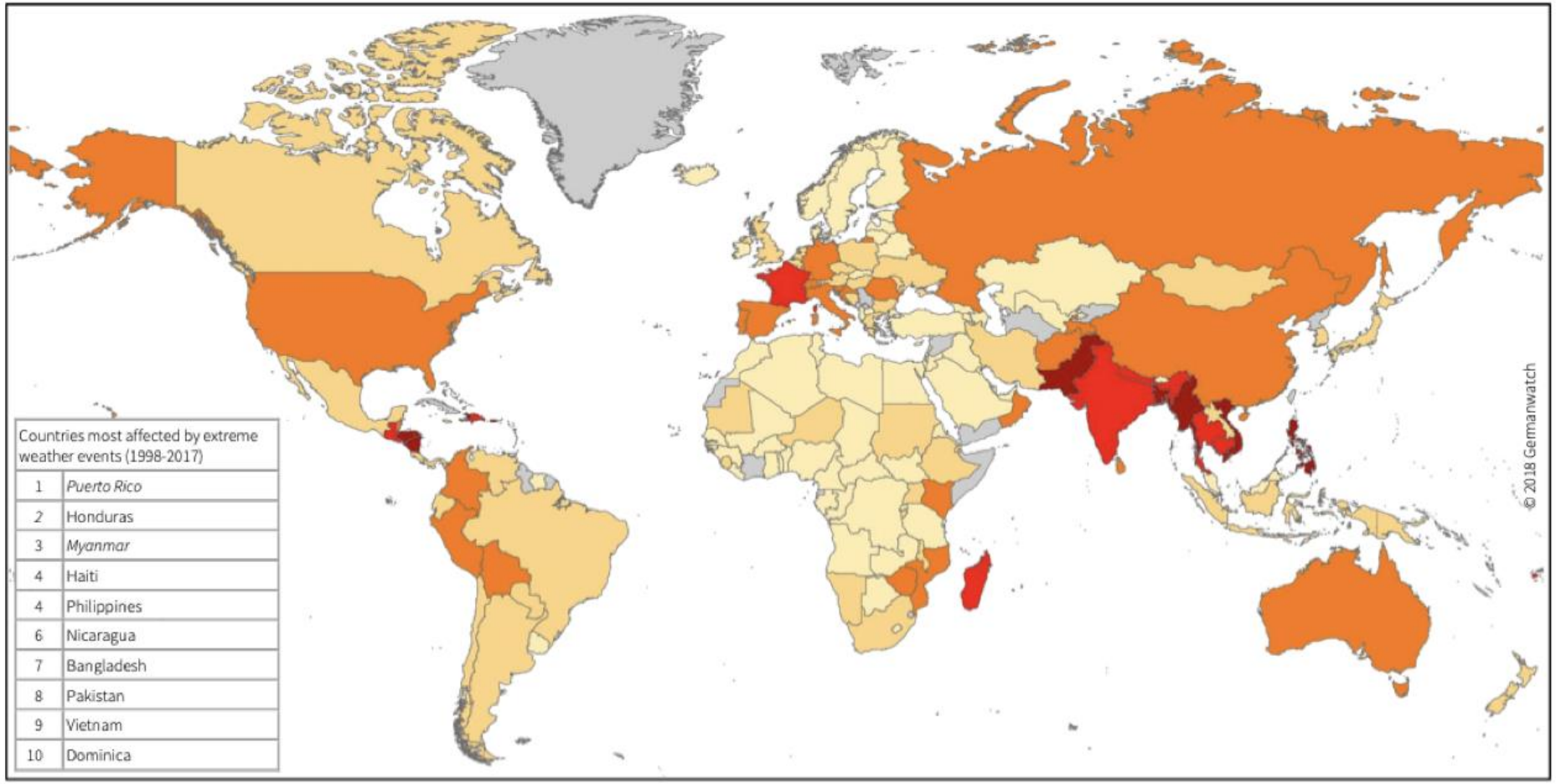


Someone needs to pay attention to the details…

Interfaz


GOOD SCIENCE-BASED LEGISLATION
LOBBYISTS
LACK OF ENFOR-CEMENT
LACK OF FUNDING
ENTRENCHED OFFICIALS
INTERNAL OPPOSITION
CANNON '09
©2009 Union of Concerned Scientists

Climate change does not affect everyone equally



Countries most affected by extreme weather events (1998-2017)	
1	*Puerto Rico*
2	Honduras
3	*Myanmar*
4	Haiti
4	Philippines
6	Nicaragua
7	Bangladesh
8	Pakistan
9	Vietnam
10	Dominica

Italics: Countries where more than 90% of the losses or deaths occurred in one year or event

Climate Risk Index: Ranking 1998 - 2017 1- 10 | 11 - 20 | 21 - 50 | 51 - 100 | >100 | No data

Figure 1: World Map of the Global Climate Risk Index 1998–2017

Source: Germanwatch and Munich Re NatCatSERVICE

¿porqué se requieren profesionales en ICP?

Profesionales son requeridos porque…

¡Gracias!

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Correo: almacristalhm1@gmail.com

DIFERENCIAS EN EL SISTEMA LEGISLATIVO VS EJECUTIVO VS EMPRESARIAL

- Legislativos → grupal → horizontal
- Ejecutivo → vertical
- Empresarial → ¿? Eficiencia!