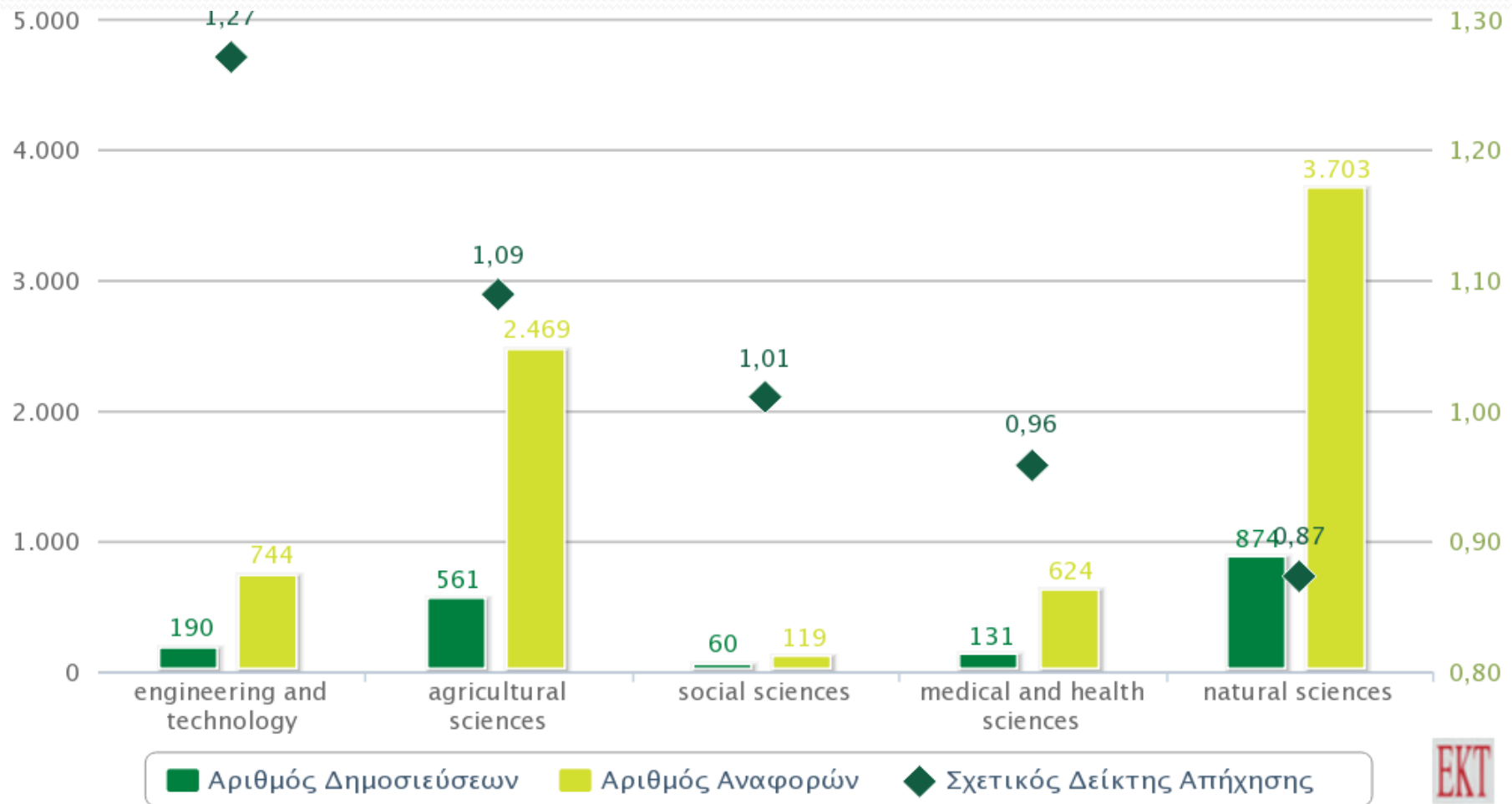


Innovation and Entrepreneurship – Applied Research and Technology Transfer Agricultural University of Athens



Με την συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης

AUA performance: publications and impact factor



Source: Σαχίνη Ε., Ν. Μάλλιου, Ν. Χούσος, Δ. Καραϊσκος (2013). *Greek publications 1996-2010: Bibliometric analysis through Scopus*, National Documentation Centre

AUA performance: limited experience in protection of intellectual property rights

Τμήματα	Αιτήσεις ευρεσιτεχνίας	Αιτήσεις ανά μέλος ΔΕΠ
Αγροτικής Οικονομίας & Ανάπτυξης	0	0,00
Βιοτεχνολογίας	4	0,25
Επιστήμης Τροφίμων & Διατροφής του Ανθρώπου	10	0,36
Επιστήμης Ζωικής Παραγωγής & Υδατοκαλλιεργειών	4	0,15
Επιστήμης Φυτικής Παραγωγής	3	0,05
Αξιοποίησης Φυσ. Πόρων & Γεωργ. Μηχανικής	7	0,22
Σύνολο	28	0,16

Number of applications for patents, project database 2002 – 2013.

Overall 28 applications have been filed by 11 faculty members (5 with 1 appl, 1 with 2, 3 with 3, 1 with 4 and another one with 8).

The crashing majority (94%) of faculty members have not filed any patent application in 2002 - 2013

Universities and the Industry

- Universities and Research Institutes as sources of constant innovation generated from research. In order to effectively use technologies, **transformation to marketed sustainable proposals** for products/process concepts is necessary.
- Empirical studies reveal a gap between research institutions and private companies. Ambivalent ability to transform results of basic research (science) or applied research (technologies) to sustainable products/processes limits the impact of academic research to the economic development.



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Steps for the development of products/processes

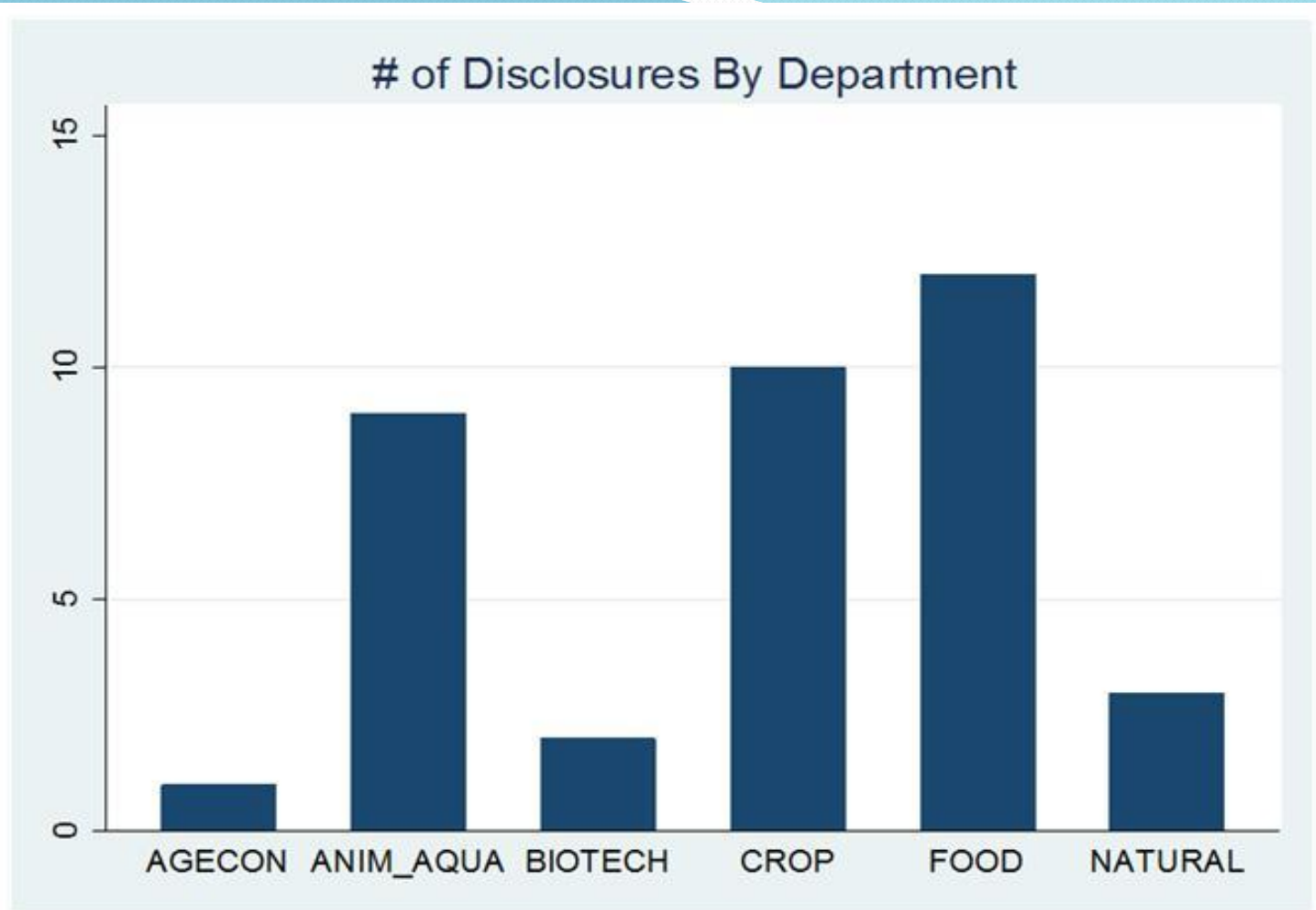
- We can distinguish 4 steps in the process of product and/or processes evolution:
- **Platforms** (knowledge, skills, potential in the existing production system)
- **Capabilities** (skills for the conception and setting up of new and alternative production systems)
- **Technology** (capacity of the engineer to design equipment, processes and products) ικανότητα να σχεδιάσει ο μηχανικός εξοπλισμό, διαδικασίες και προϊόντα
- **Science** (basic knowledge and concepts required as a background)



Με την συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης

- Exhaustive recording of current research activity
- Coverage of all scientific departments in AUA
- **market opportunity assessment of technology disclosed** (products/processes/methods of production)
- **targeted consulting and technical support of mature ideas** (implementation of business plans) aiming at new ventures creation (start ups) and/or licensing to existing companies
- setting up a **network for funding** R&D and new ventures (new forms of funding)





AGECON stands for Agricultural Economics & Rural Development,
CROP for Crop Science,
ANIM_AQUA for Animal Science and Aquaculture,
BIOTECH for Biotechnology,
FOOD for Food Science & Technology and
NATURAL for Natural Resources Management & Agricultural Engineering.

invention disclosures by type of result

Type	#	percent
R&D Services for the Industry	11	26%
R&D Services for the Primary sector	7	17%
Service providing for validation/certification	9	21%
Products	7	17%
Services	8	19%
TOTAL	42	100%



Ευρωπαϊκή Ένωση
Ευρωπαϊκό Ταμείο
Περιφερειακής Ανάπτυξης



Με την συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης

examples by type of result

Type	#
R&D Services for the Industry	Fresh gilthead sea bream fillets flavored with ouzo using edible films http://techtransfer.aua.gr/images/posters/23.pdf
R&D Services for the Primary sector	Genetic profile identification of Greek ovine products' origin using the "from stable to table" approach with the use of contemporary molecular methods http://techtransfer.aua.gr/images/posters/4.pdf
Service providing for validation/certification	Botanical and geographical discrimination and adulteration of plant products using Diffuse Reflectance Fourier Transform Infrared, Raman Spectroscopies and Chemometrics http://techtransfer.aua.gr/images/posters/20.pdf
Products	Holistic utilization of pomegranate: Wine (Ria), Oil, Compost http://techtransfer.aua.gr/images/posters/36.pdf
Services	Process Analytical Technology for 'near real time' Holistic process control in Food products (FoodPATH) http://techtransfer.aua.gr/images/posters/15.pdf

current situation

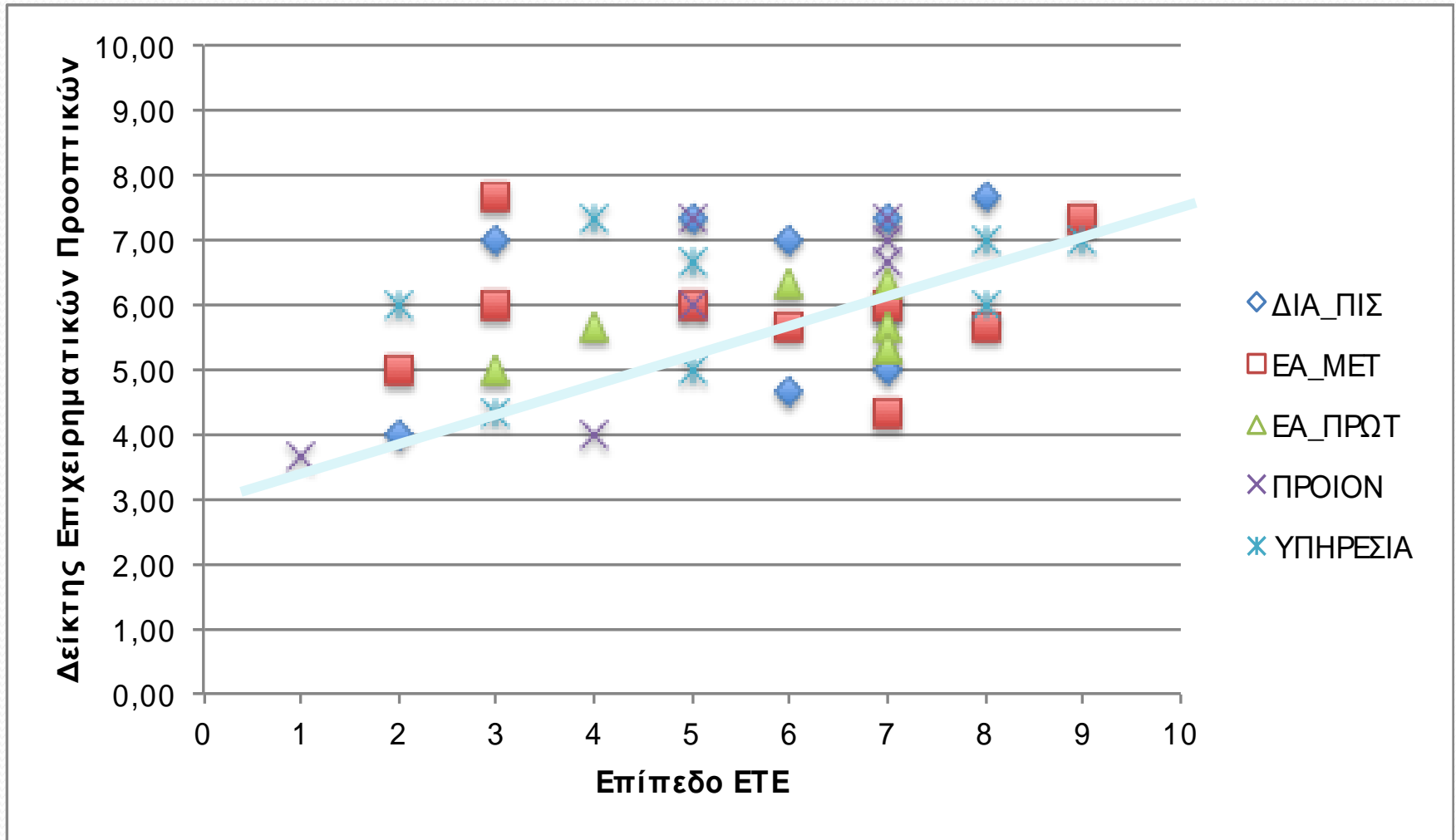
AUA faculty scientists lacked an understanding of what tech-transfer is, e.g. most had never seen a licensing contract, and the AUA had only ever drafted one material transfer agreement.

As they only focused on scientific problems, not surprisingly, the demand side of commercialization was a *terra incognita* for them, e.g. they had no sufficient understanding of the difference between a prototype and a marketable product

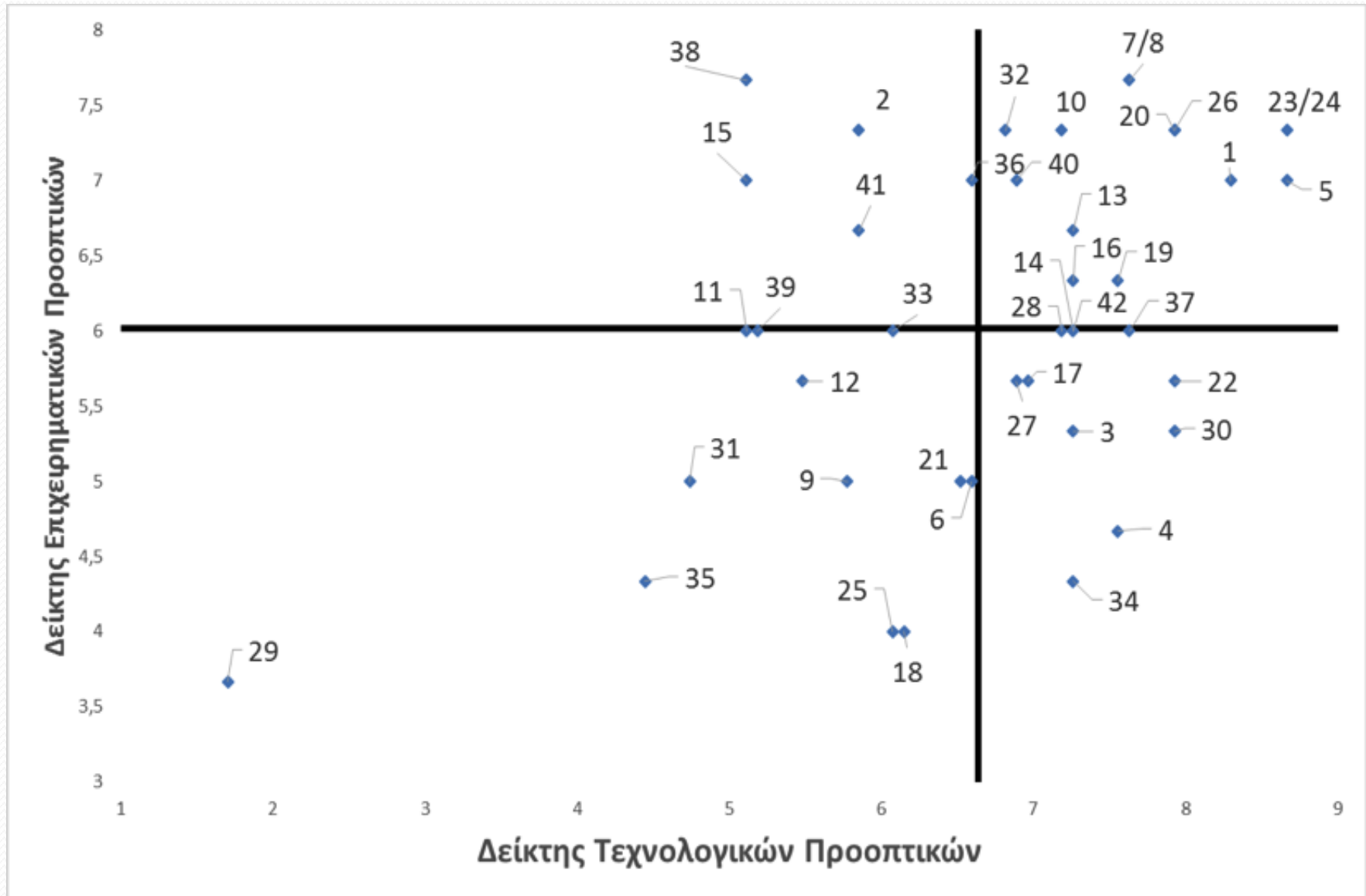
Why the introduction of a well known technology in a satiated market may face difficulties, or that an invention that was a *bricolage* of established technologies needed to license the relevant patent rights before commencing production.

The role of intellectual property rights (IPRs) was also misunderstood, e.g. they failed to see the difference between a recipe and a patentable invention, or to understand how patents facilitate tech-transfer.

Business perspectives – team motivation versus Technology Readiness Level



Bi-criteria evaluation



initiatives in the Universities

- Industry needs to receive proposals already raised at the level of “capabilities” and / or “platform”.
- Universities remain in the “basic science” level and in the case of applied research reach the “technology” level.
- Tech Transfer Offices
- Support researchers to reach higher TRL levels, contact with venture capital and angel investors, with entrepreneurs and technology management companies.



Με την συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης

- In order for the University to follow the trend to productively use a significant percentage of inventions and technologies and in general of intellectual property resulted from research has to develop the ability to interact with industry at a higher level than **science** and **technology** enhancing its understanding on market requirements adapting appropriate actions.
- The question is how to drill ***sustainable*** ideas/ processes or product projects but also how each of them will be supported by a well elaborated ***business plan***



Με την συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης



- Licensing to national and international industry
- Creation of special type spin-off companies
- Network of consultants and innovation brokers
- Cultural change – education in theory and practice – learning by doing and distance techniques
- Elaboration of prototype transaction documents and a general framework to organize legally within the university the productive use (commercialization) of research outcomes.



Με την συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης





ευχαριστώ για την προσοχή σας !

Thanks for your attention !

<http://techtransfer.aua.gr>



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