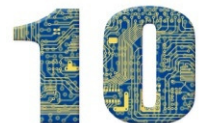

Lean Intellectual Property Rights (IPR) Protection: Patent Pools & OU812 Open Innovation Engine

by

Carlos R. Villamar, J.D., M.S.E.E., B.S.E.E.

crvillamar@villamars.com

October 22, 2020



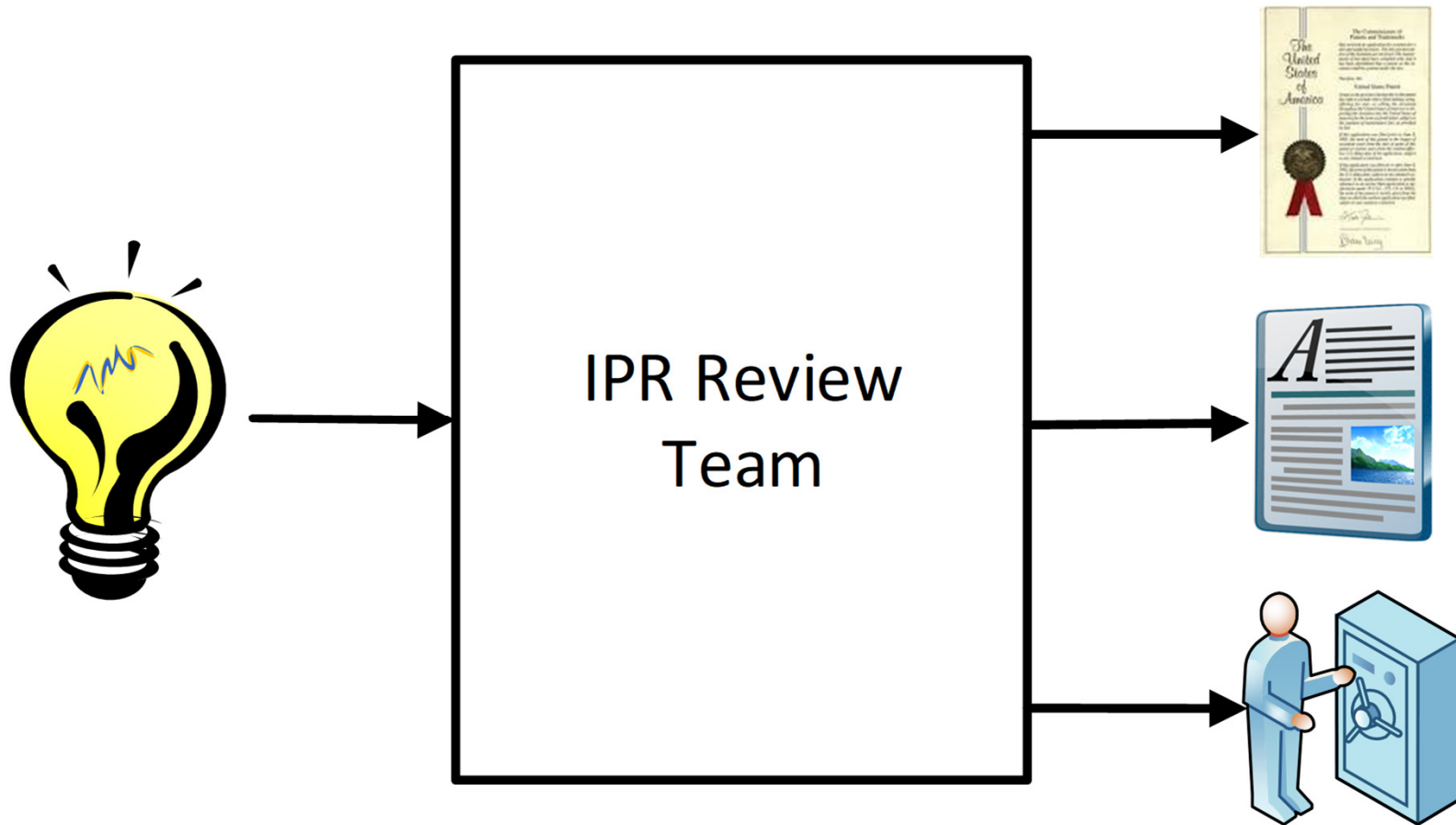
IP Umbrella

•IP protection can come in various forms:

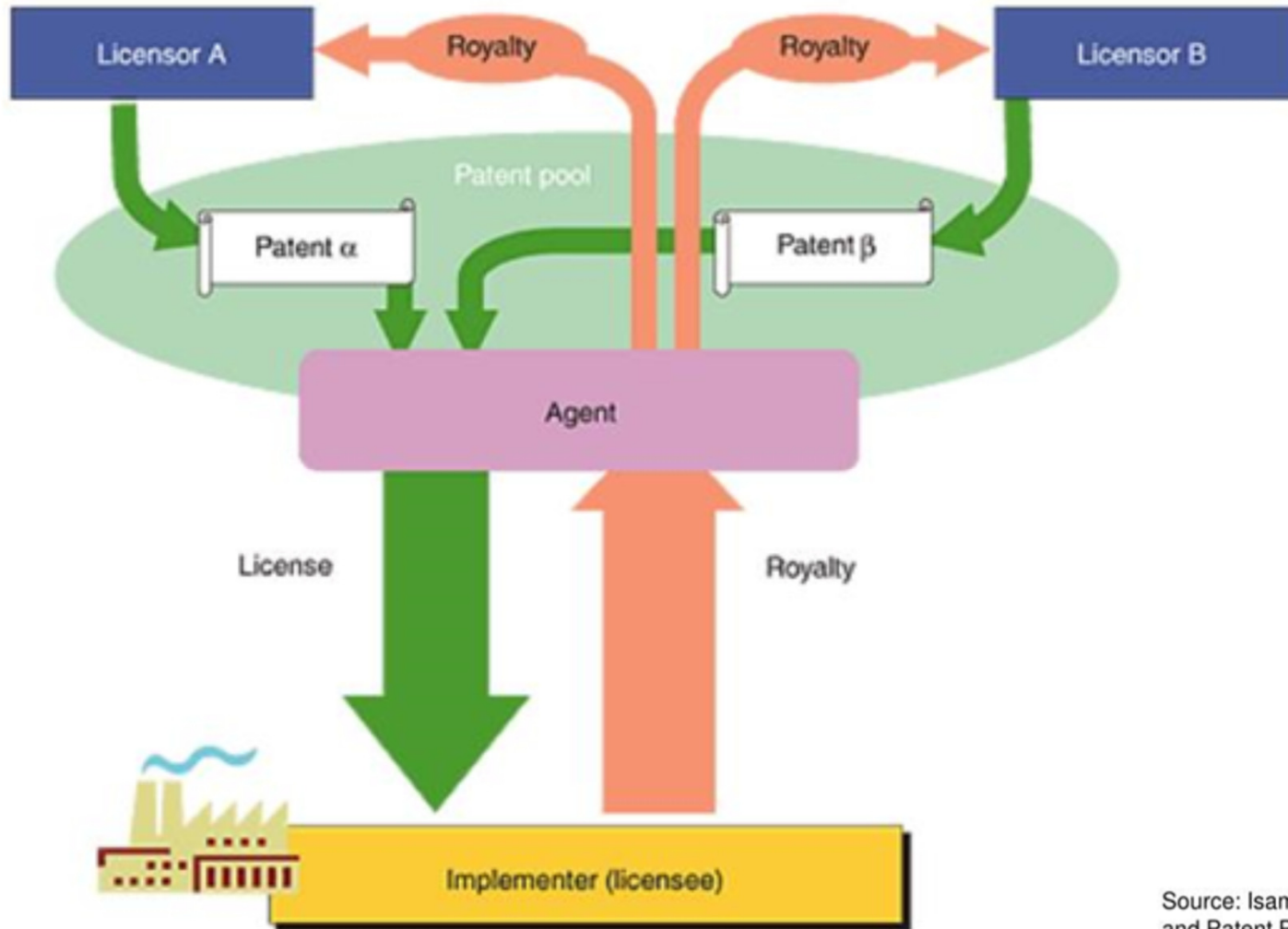
- Trade secrets
- Copyrights
- Trademarks
- Patents
- Licensing



IPR Review Process

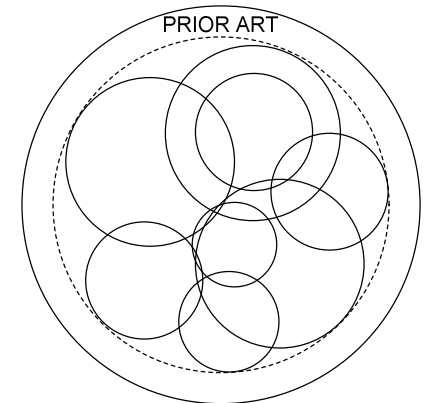
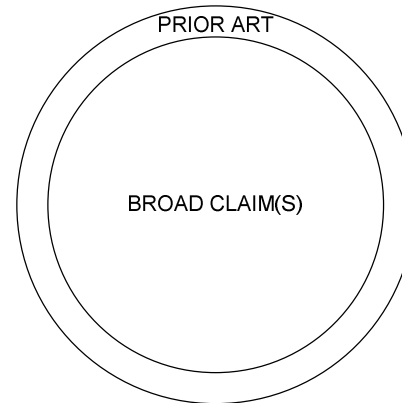
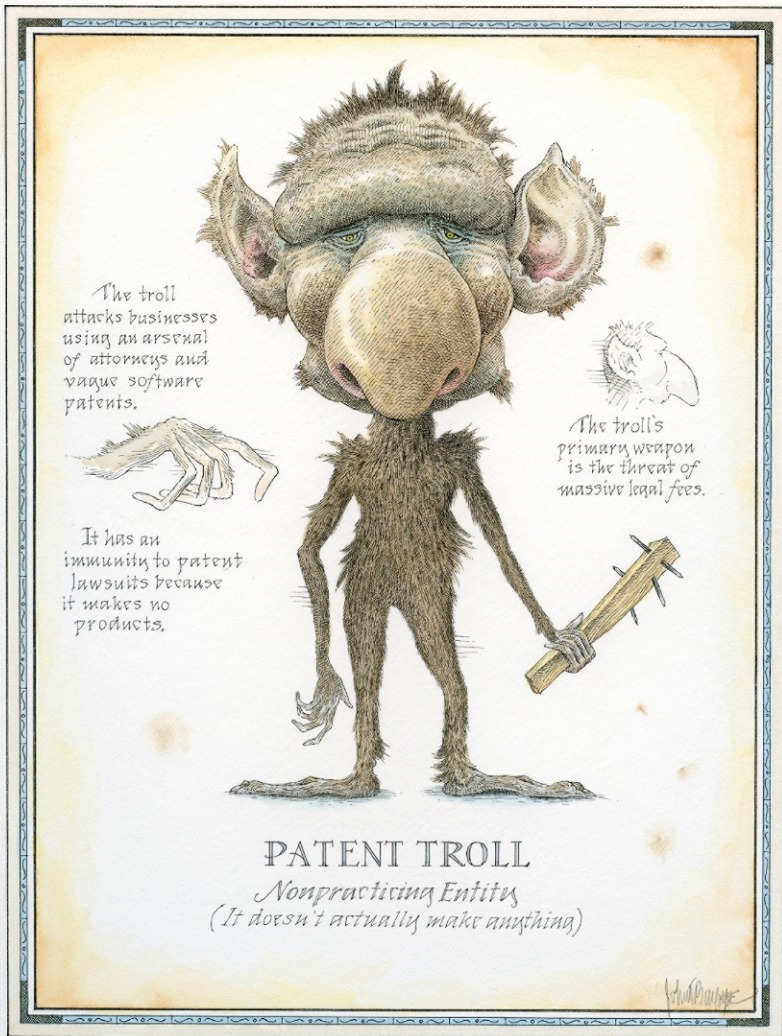


What is a patent pool?



Source: Isamu Yoshimatsu, Standards and Patent Pools

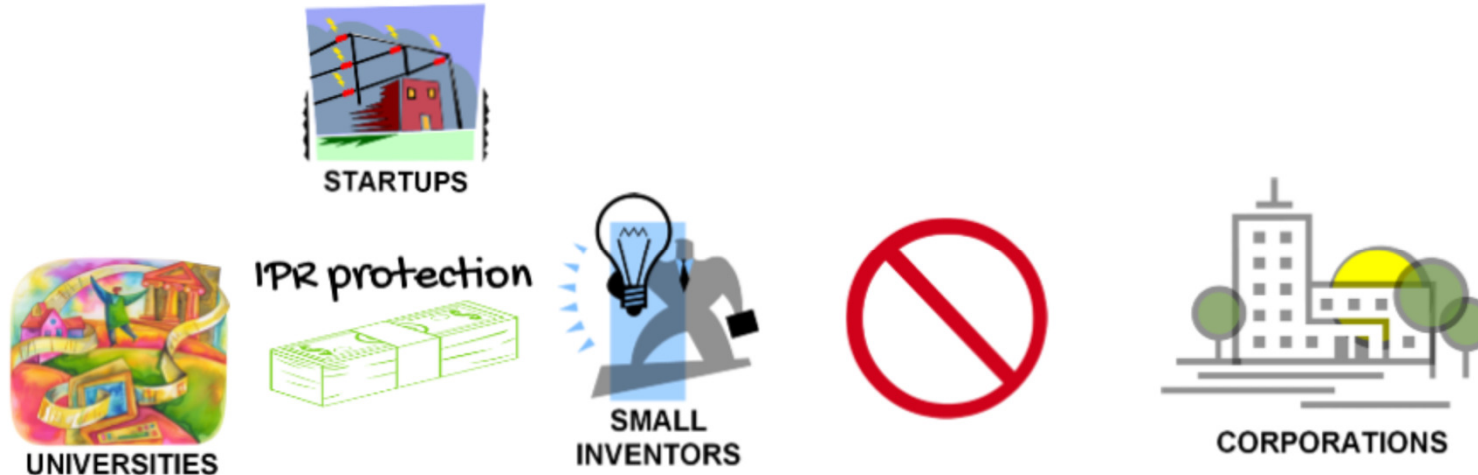
What is the patent troll model?



OU812 Open Innovation Engine: Why OU812?

Why OU812?

Because without OU812 startups, universities & small inventors cannot fairly compete with the corporations due to the high costs of intellectual property rights (IPR) protection!

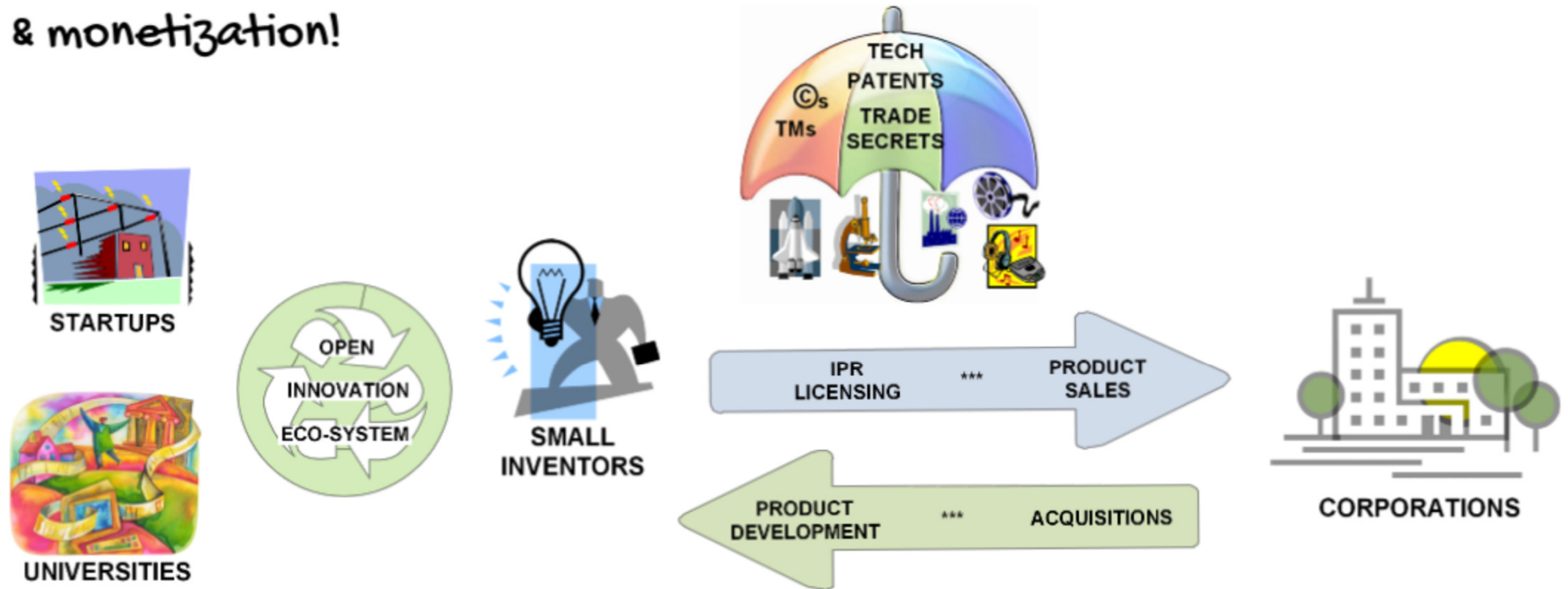


"The Power of Collaboration" 

OU812 Open Innovation Engine: The solution!

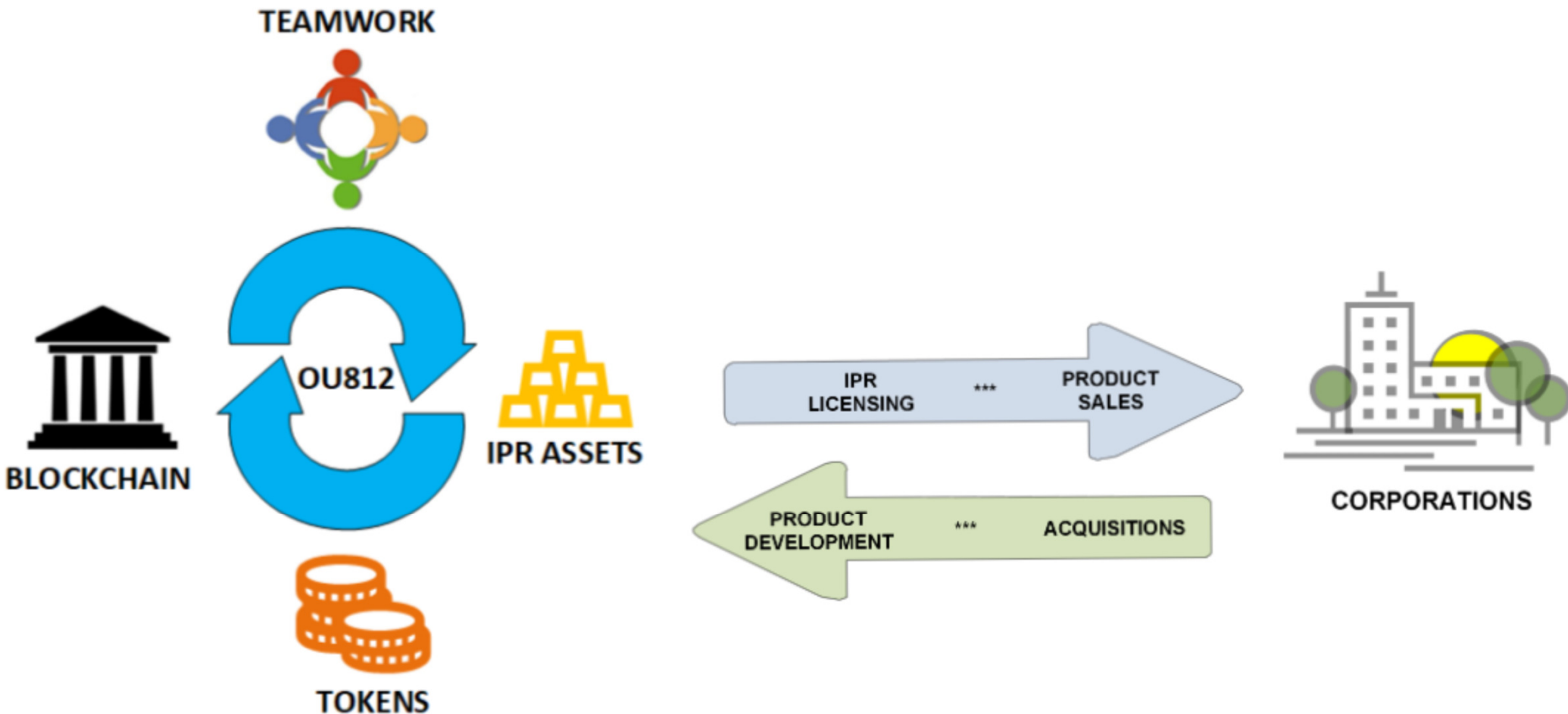
The solution?

OU812 team-based open innovation eco-system
with Intellectual Property Rights (IPR) protection, sharing
& monetization!



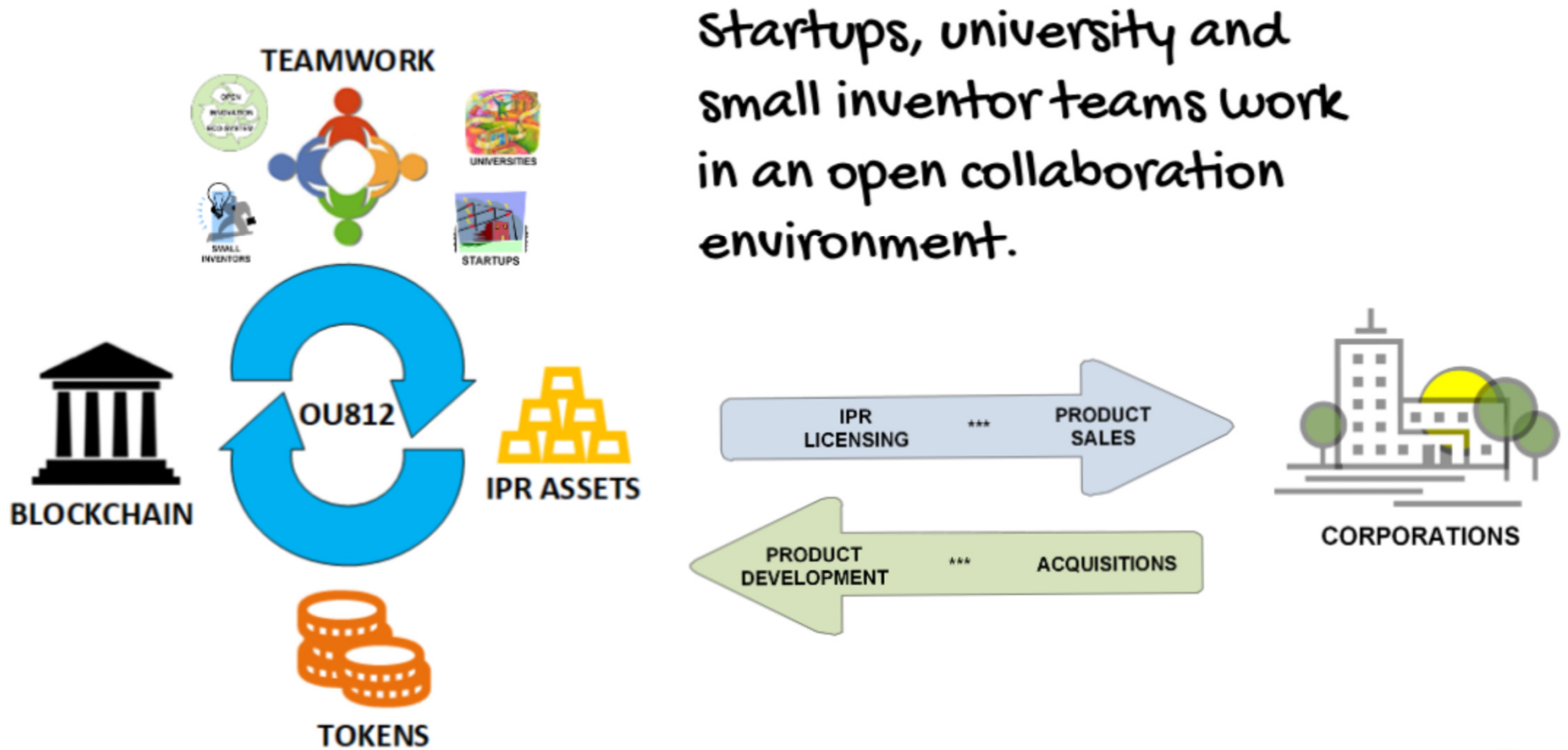
"The Power of Collaboration "

OU812 Open Innovation Engine: How does OU812 work?



"The Power of Collaboration 

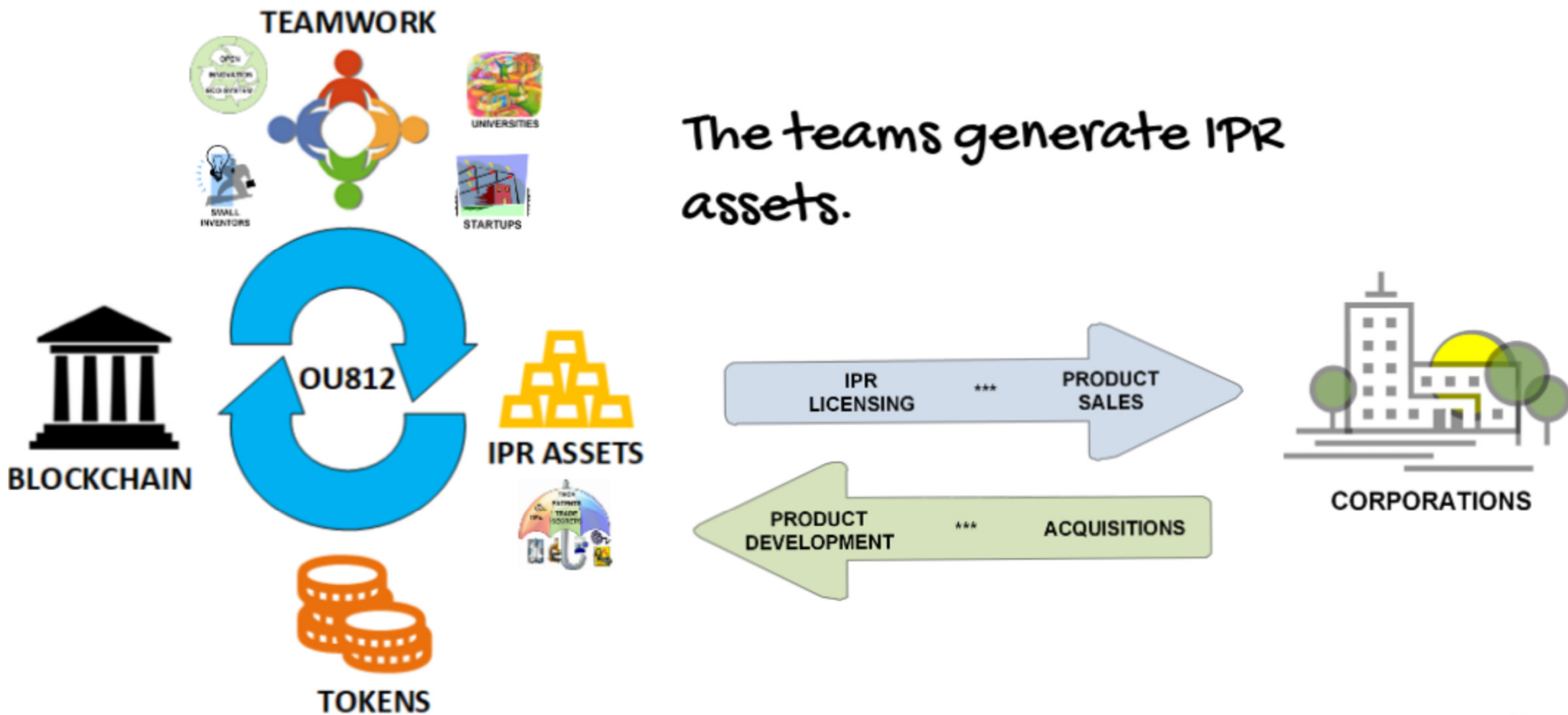
OU812 Open Innovation Engine: Open Collaboration Environment



Startups, university and small inventor teams work in an open collaboration environment.

"The Power of Collaboration 

OU812 Open Innovation Engine: IPR Asset Generation



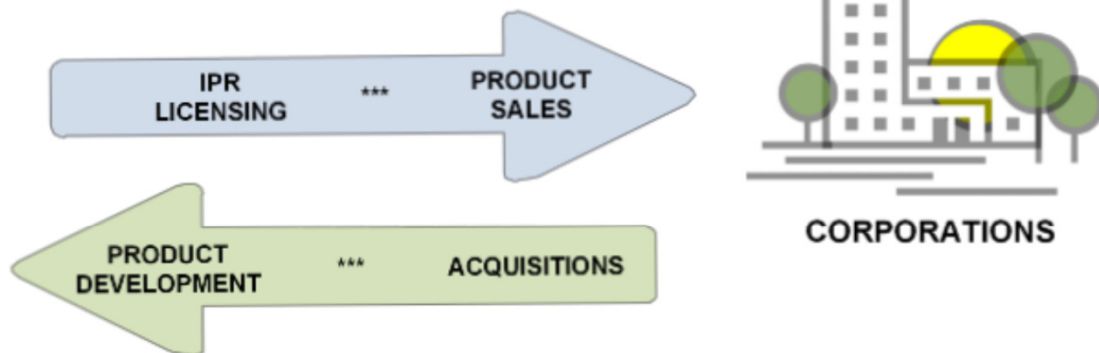
The teams generate IPR assets.

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OU812 Open Innovation Engine: IPR Asset Valuation



The IPR assets are assigned value and blockchain distributed ledger tokens are issued based on the assigned value.

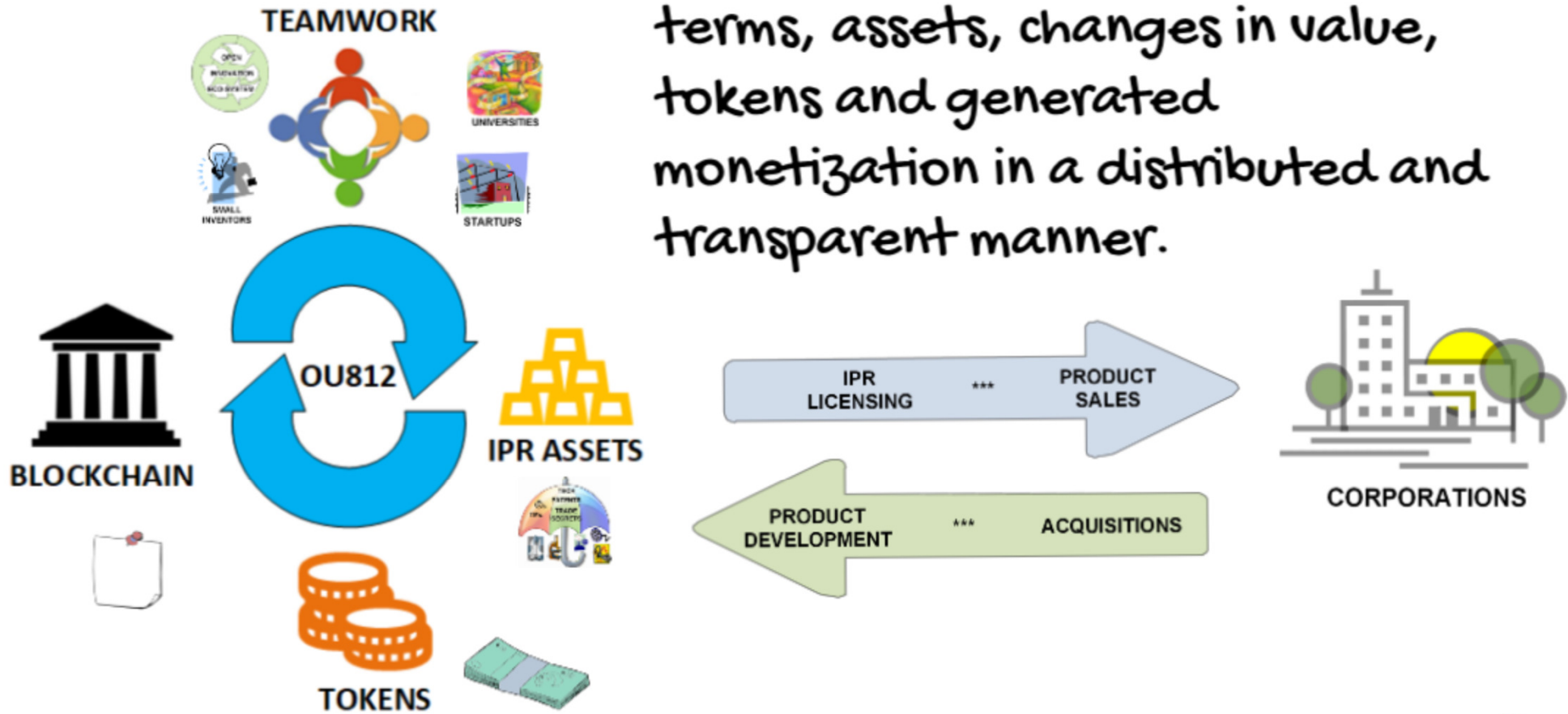


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OU812 Open Innovation Engine: Smart Contracts

Blockchain smart contracts track terms, assets, changes in value, tokens and generated monetization in a distributed and transparent manner.



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OU812 Open Innovation Engine: Graph View

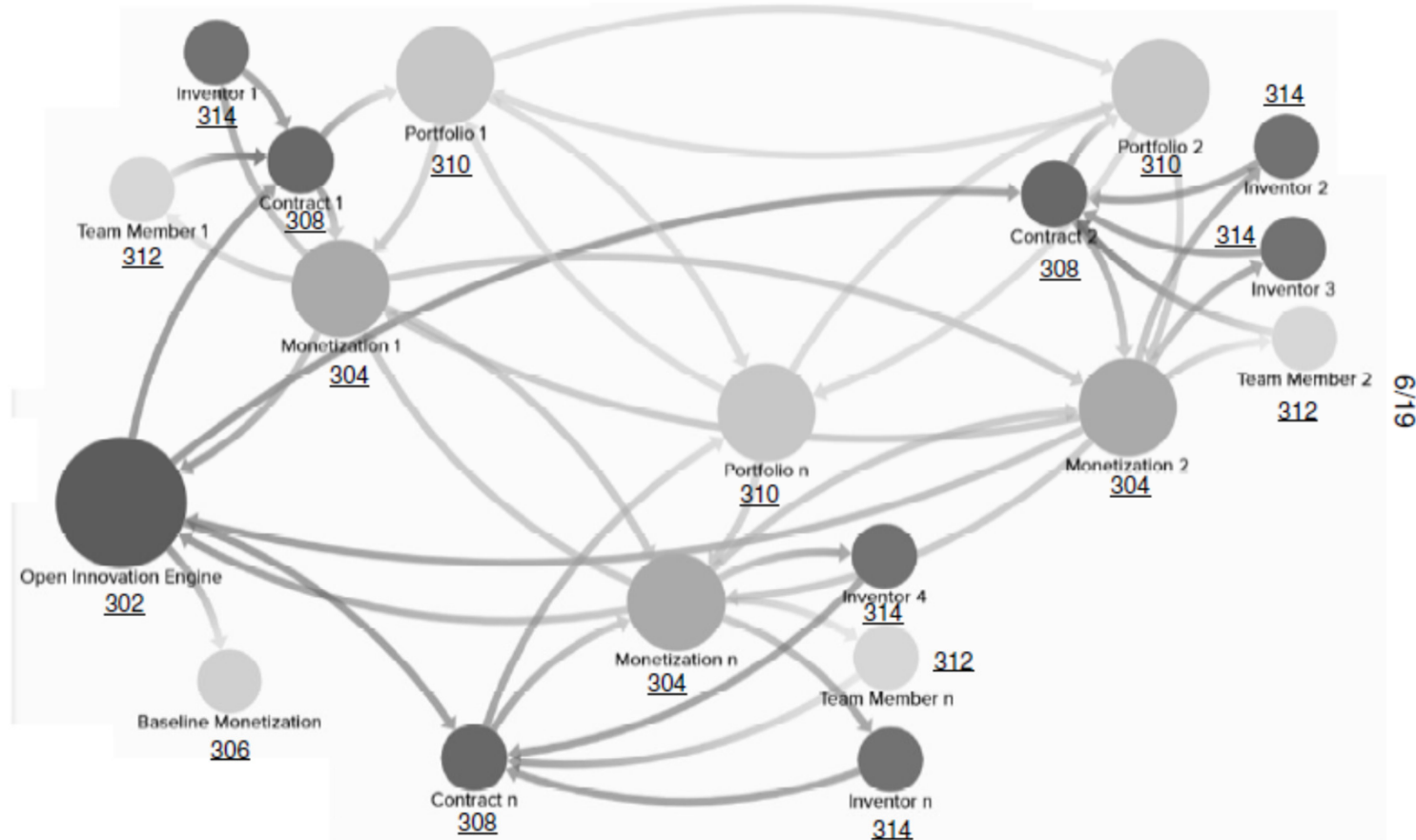
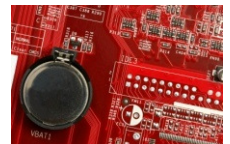


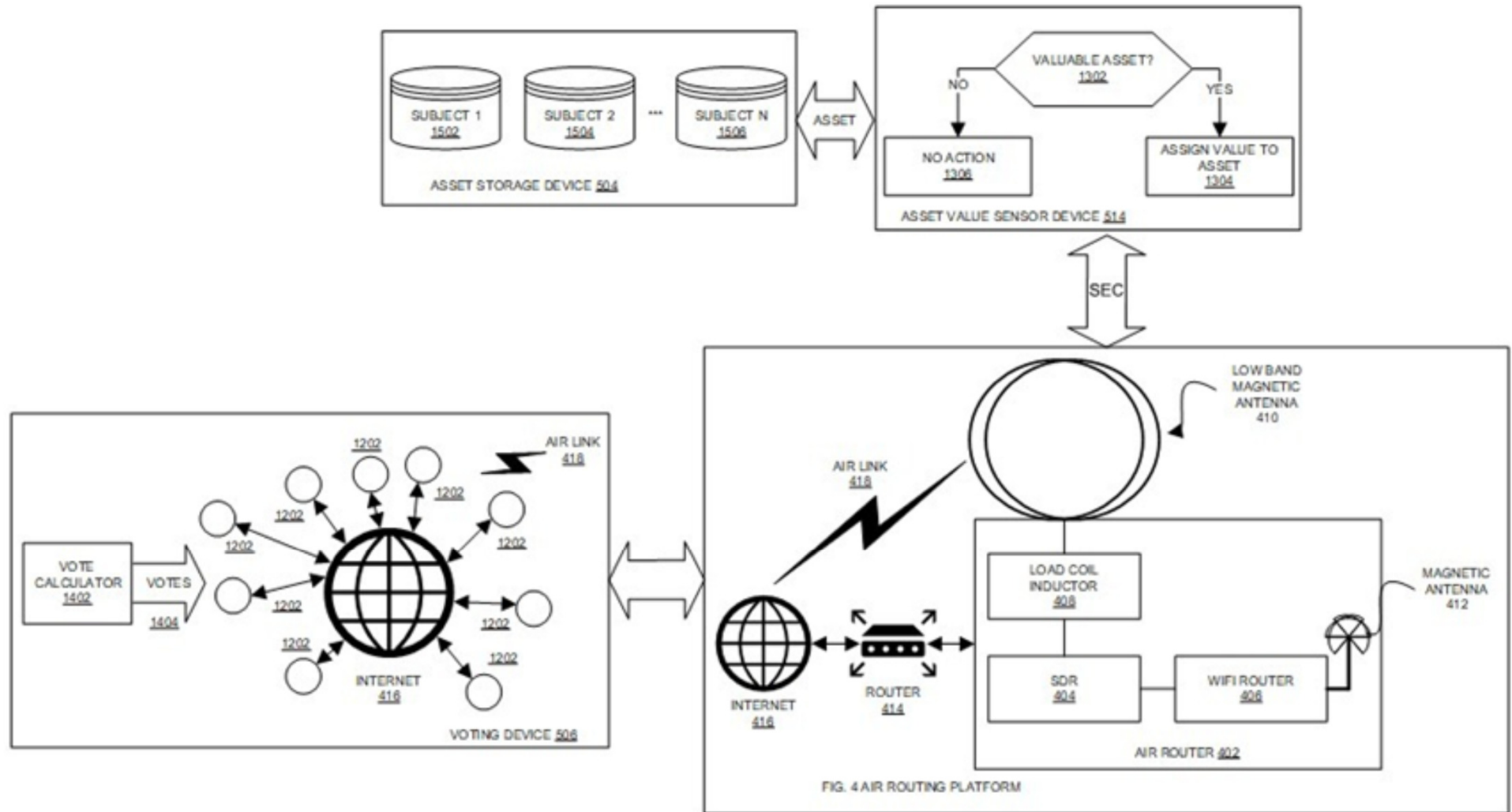
FIG. 3A OPEN INNOVATION ECOSYSTEM

300

U.S. and PCT patents and applications pending.



OU812 Open Innovation Engine: Architecture Overview



*U.S. and PCT patents and applications pending.



OU812 Open Innovation Engine: From Greenhouse to Skyscraper

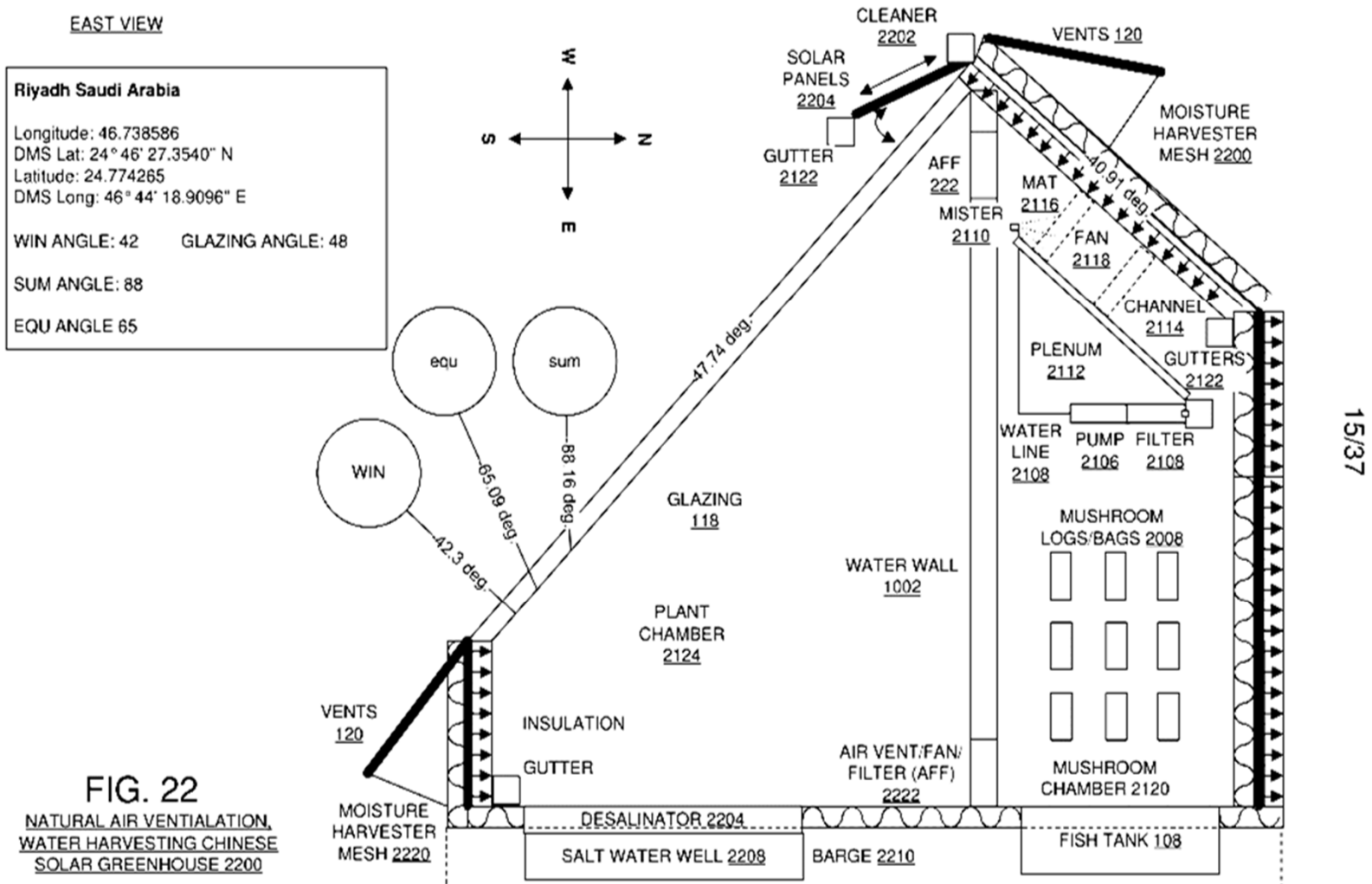


FIG. 22
 NATURAL AIR VENTILATION,
 WATER HARVESTING CHINESE
 SOLAR GREENHOUSE 2200

U.S. and PCT patents and applications pending.

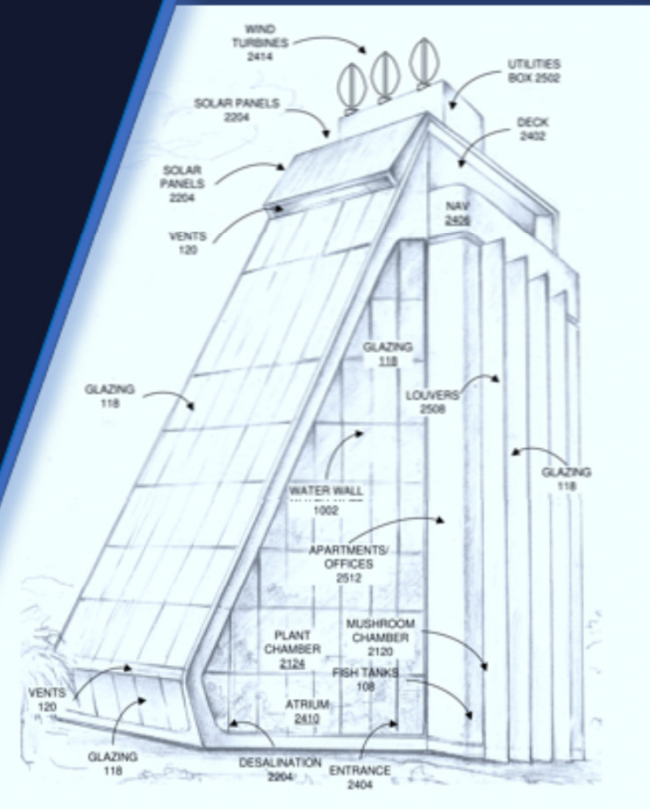


OU812 Open Innovation Engine: From Greenhouse to Skyscraper

DREAM HABITAT

CLOSED LOOP ECO SYSTEM

GREEN
and
Energy
Efficient
Structures



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U.S. and PCT patents and applications pending.

The Villamar Firm PLLC

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OU812 Open Innovation Engine: Innovation Searching

patSnap Search Workspace aquaponic greenhouse ~ 231 Help Center

AND Refine keywords 231 total records Analyze Landscape Insights Export Set Alerts Save to Workspace

Change view Copy Query Save Query Order by most relevant

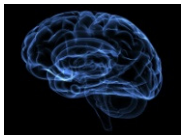
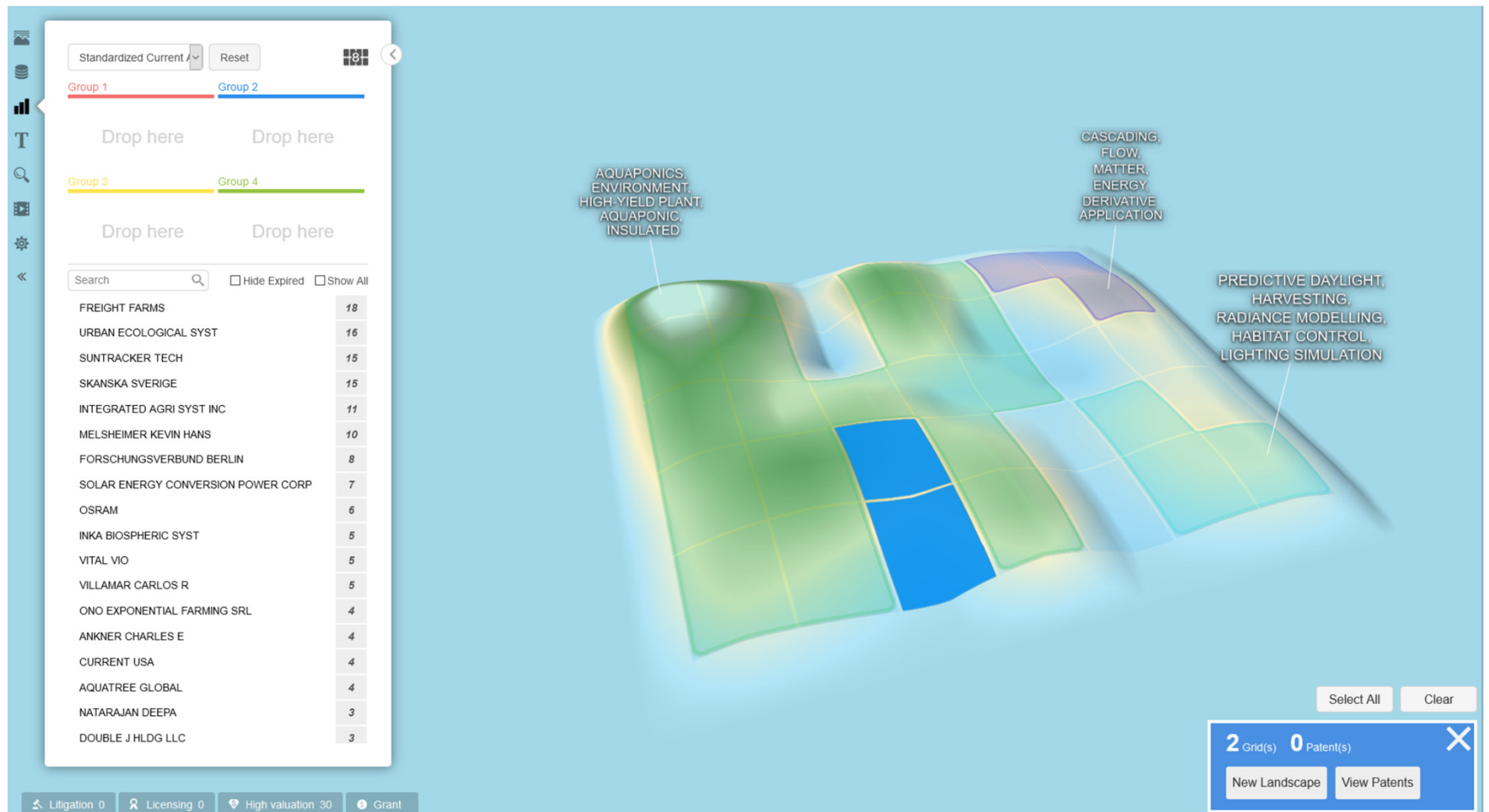
Publication Number	Title	Legal Status & Events	Current Assignee	Inventor Name	Application Date	Publication Date
1 • US8291640	Aquaponic system for vegetable and fish production	Non-payment Transfer	FORSCHUNGSVERBUND BERLIN E. V.	KLOAS, WERNER RENNERT, BERNHARD VAN BALLEGOOY, CHRISTOPH +1	27 Oct 2008	23 Oct 2012
2 • US20110131880A1	Aquaponic system for vegetable and fish production	Non-payment Transfer	FORSCHUNGSVERBUND BERLIN E. V.	KLOAS, WERNER RENNERT, BERNHARD VAN BALLEGOOY, CHRISTOPH +1	27 Oct 2008	09 Jun 2011
3 • US20160095301A1	Closed loop fish and plant farming structure and method	Withdrawn Transfer	MARINER FARMS, LLC	CARMAN, BRUCE	02 Oct 2015	07 Apr 2016
4 • AU2008361178B2	Aquaponic system for vegetable and fish production	Ceased	FORSCHUNGSVERBUND BERLIN E. V.	KLOAS, WERNER RENNERT, BERNHARD VAN BALLEGOOY, CHRISTOPH +1	27 Oct 2008	15 Dec 2011
5 • CA2708247A1	Aquaponic facility for vegetable and fish production	Non-payment Transfer	FORSCHUNGSVERBUND BERLIN E. V.	KLOAS WERNER RENNERT BERNHARD VAN BALLEGOOY CHRISTOPH +1	27 Oct 2008	04 Mar 2010
6 • CA2708247C	Aquaponic facility for vegetable and fish production	Non-payment Transfer	FORSCHUNGSVERBUND BERLIN E. V.	KLOAS WERNER RENNERT BERNHARD VAN BALLEGOOY CHRISTOPH +1	27 Oct 2008	22 Jan 2013

FILTERS: Assignee (Current Assignee: SKANSKA SVERIGE AB, SUNTRACKER TECHNOLOGIES LTD., FREIGHT FARMS, INC., INTEGRATED AGRICULTURE SYSTEMS, INC., MELSHEIMER, KEVIN HANS, URBAN ECOLOGICAL SYSTEMS LTD, FREIGHT FARMS, SOLAR ENERGY CONVERSION POWER CORPORATION, OSRAM GMBH, FORSCHUNGSVERBUND BERLIN E.V.), Grouped Assignee (+ Create new group), Classification, Application Year, Std. Current Assignee Type, Authority, Patent Type, GBC, Publication Year, Issue Year, Simple Legal Status, Legal Status.

Help

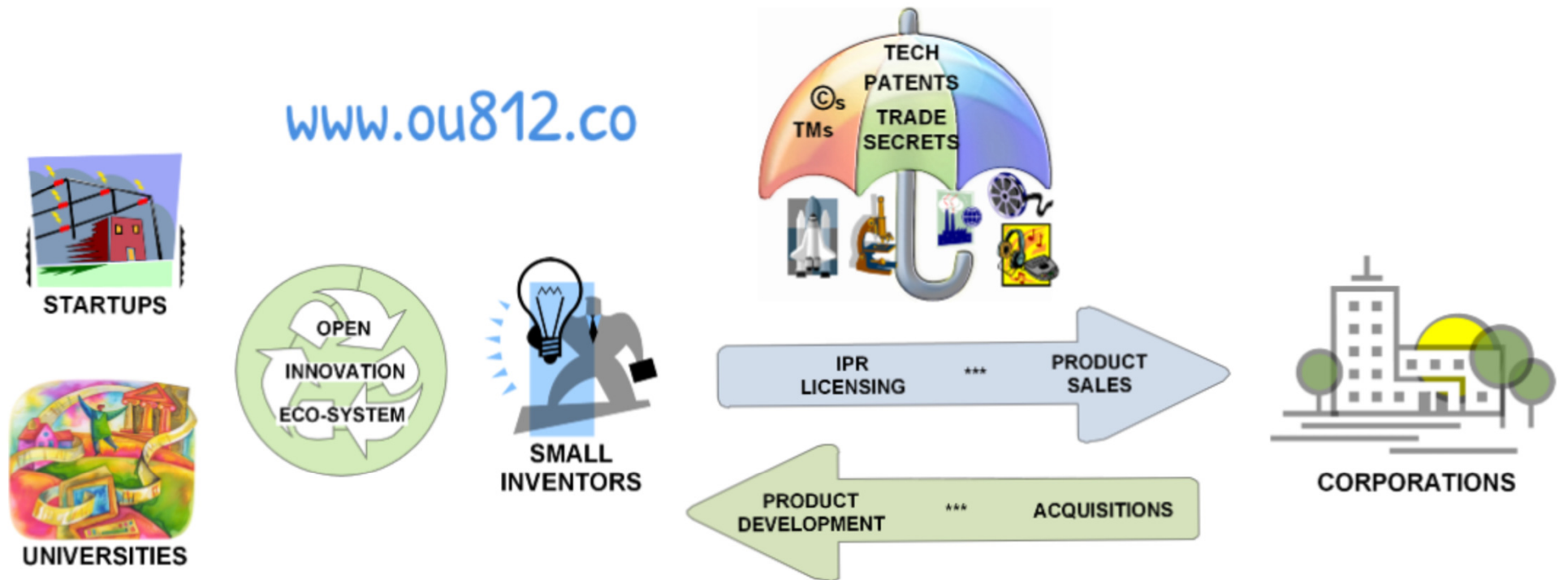


OU812 Open Innovation Engine: Innovation Analysis



OU812 Open Innovation Engine: Team Players Wanted!

Are you a Team Player?



"The Power of Collaboration" 💡





The Villamar Firm PLLC

Attorneys at Law



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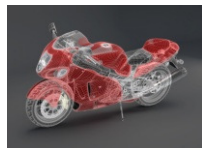
The Villamar Firm is a Professional Limited Liability Company (PLLC) law firm based in Virginia with easy access to the [United States Patent and Trademark Office](#). The Villamar Firm specializes in the practice of Intellectual Property Law, including [patents](#), [trademarks](#), [copyrights](#), [trade secrets](#) and [computer and internet law](#).

At The Villamar Firm we strive to provide the best possible work product, at a competitive price, and with superior client service.

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The Villamar Firm PLLC



Carlos R. Villamar, J.D., M.S.E.E., B.S.E.E.

attorneys



Carlos R. Villamar is a founding partner of **The Villamar Firm**.*

Areas of Practice: Patents, Trademarks, Copyrights, Licensing.

Mr. Villamar is a patent attorney with broad experience assisting clients with foreign and domestic patent application preparation and prosecution, opinion work, litigation, and IP counseling.

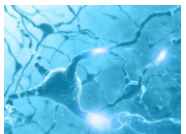
*Mr. Villamar is licensed to practice US state law in Virginia and the District of Columbia.



Mr. Villamar's expertise covers a wide variety of technologies, including wired, wireless, optical, terrestrial broadcast and satellite communications, neural networks, fuzzy logic and artificial intelligence, encryption, digital signal processing, speech recognition and language understanding, sound and image processing, video processing, medical imaging, video games, on-line gaming, gaming engines, physics engines, 3D graphics, virtual worlds, Digital Rights Management, e-commerce, military technologies, radar, sonar, fighter aircraft, missiles, ground guidance, heads-up displays, computers and architectures, computer networks and security, semiconductors, device manufacturing, nanotechnology, oil and gas exploration, renewable energy, electrical, solar, thermal and wind power, automotive technologies, and electromechanical technologies.

Prior to founding **The Villamar Firm**, Carlos gained extensive experience in numerous aspects of intellectual property law as an attorney in large, national general practice and IP boutique law firms and as a patent examiner in the Speech Signal Processing Group of the [U.S. Patent Trademark Office](#).

As an electrical engineer, Mr. Villamar has over nine years of commercial experience, including production design and testing for the [Standard Missile Program](#) at the [General Dynamics Corporation](#) Missile Systems Group (purchased by [Raytheon](#)), high-speed digital logic and computer design for the [Advanced Tactical Fighter Program](#) at the [Hughes Aircraft Company](#) Radar Systems Group (purchased by [Raytheon](#)), and IR&D and design of high-speed digital signal processing and communications systems at the Hughes Aircraft Company Advanced Circuits Technology Center (purchased by [Raytheon](#), spun off as [TelASIC](#) and then purchased by [MTI](#)).



Education: J.D., The George Washington University Law School (1998); M.S.E.E., California State University, Long Beach, emphasis in Digital Signal Processing & Neural Networks, (1992); and B.S.E.E., California State Polytechnic University, Pomona, emphasis in Digital Signal Processing, (1987).

Admitted: Virginia, the District of Columbia, the United States Supreme Court, the Court of Appeals for the Fourth Circuit, the Court of Appeals for the Federal Circuit, the Virginia Supreme Court, and the District Court for the Eastern District of Virginia. Served on the Board of Directors of the Federal Circuit Bar Association.

Carlos R. Villamar may be reached by email at crvillamar@villamars.com or by telephone at (703) 623-4122.



Barbara Villamar, S.J.D., LL.M.

attorneys

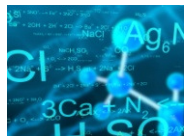


Dr. Barbara Villamar is Of Counsel to **The Villamar Firm**.*

Areas of Practice: International Business Transactions, Corporate, International Trademark Law.**

*Dr. Villamar is only licensed to practice US state law in the District of Columbia.

**Dr. Villamar's practice will be limited to Trademark Law while licensed in the District of Columbia.



Dr. Villamar is licensed to practice law in [Germany](#) and the United States and specializes in international and domestic corporate and business issues and trademark law. She is also available to serve in a liaison capacity between German and U.S. counterparts. Before joining the firm, Dr. Villamar worked on both sides of the Atlantic advising and representing clients in corporate, regulatory and transactional matters. She has broad experience guiding clients through the evaluation, negotiation and closing process of commercial arrangements, specifically pertaining to Internet service providers. She has assisted in the formation and restructuring of corporations and joint ventures, execution of domestic and cross-border transactional agreements, and formulation of internal and external corporate policies.

Dr. Barbara Villamar ist für **The Villamar Firm** als freie Mitarbeiterin tätig.*

Schwerpunkte: Internationales Handels- und Gesellschaftsrecht, Internationales Markenrecht. Dr. Villamar ist in Deutschland und in den Vereinigten Staaten als Rechtsanwältin zugelassen und konzentriert sich in ihrer Tätigkeit auf nationales und internationales Handels - und Gesellschaftsrecht und Markenrecht. Darüberhinaus steht sie als Verbindungsperson zwischen deutschen und US-amerikanischen Partnern zur Verfügung. Dr. Villamar hat sowohl in Deutschland als auch in den USA Mandanten im Unternehmensrecht beraten und vertreten. Sie hat, u.a. im Bereich der Telekommunikation tätige, Klienten während des Evaluierungs - und Verhandlungsprozesses unterstützt, z.B. bei der Gründung und Umstrukturierung von Unternehmen und Joint Ventures, im Zusammenhang mit nationalen und internationalen Handelsverträgen und bei der Formulierung von internen und externen Unternehmenspraktiken.



Education/Ausbildung:

Johannes-Gutenberg-Universität, Mainz (1. State Bar Exam 1989).

Landgericht Frankfurt am Main (2. State Bar Exam 1992).

The George Washington University Law School (LL.M. 1994).

The George Washington University Law School (S.J.D. 2005).

Bar Admissions/Zulassungen:

Landgericht Frankfurt am Main, Germany (1992) (presently dormant)

*District of Columbia Court of Appeals, Washington, D.C. (2002).

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