

# USO ESTRATÉGICO DE LA BÚSQUEDA DE ARTE PREVIO EN LA CONFORMACIÓN DE LOS PORTAFOLIOS DE PROPIEDAD INDUSTRIAL



/Carey

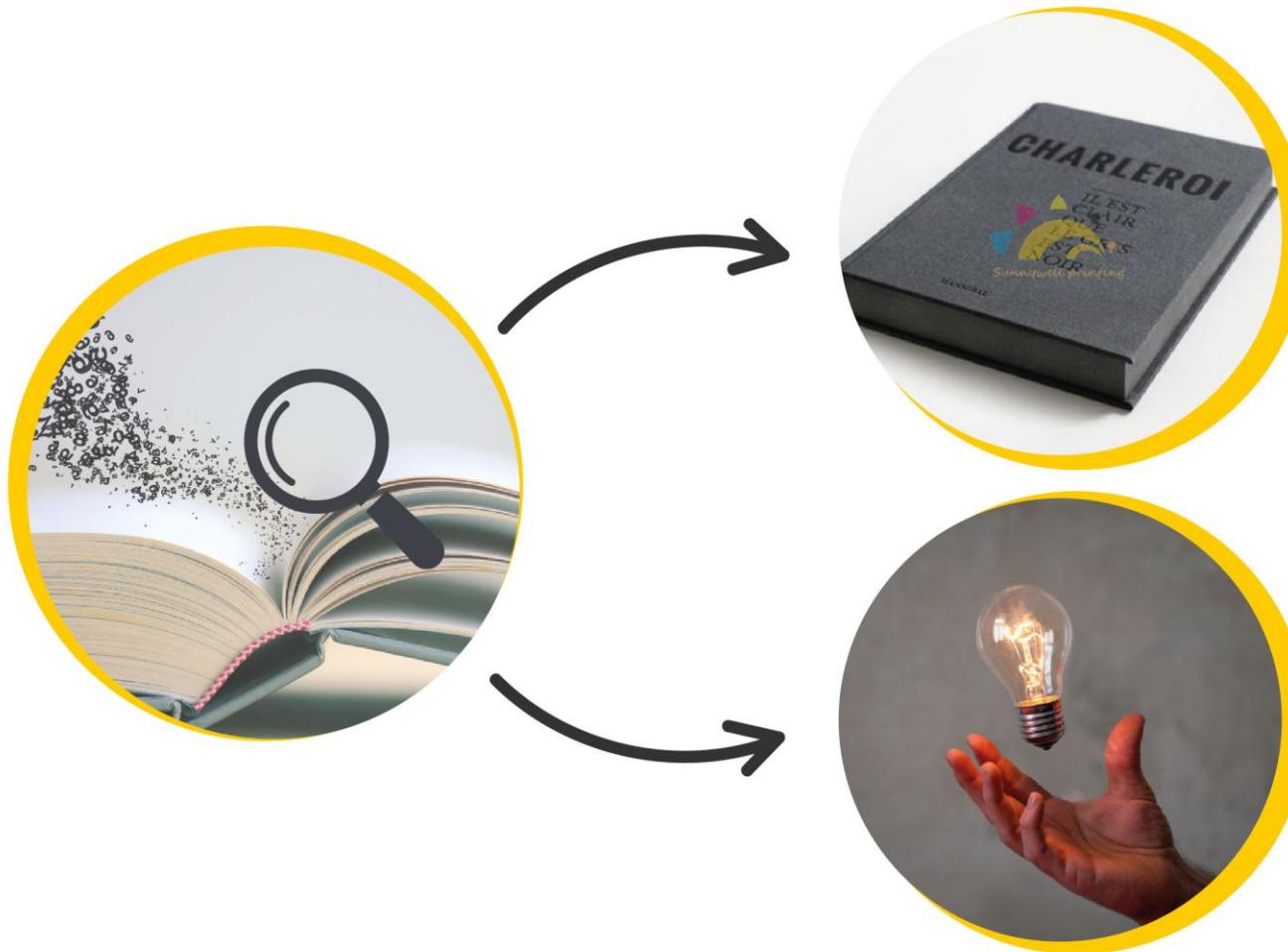
# ¿ES POSIBLE LOGRAR UN ENCUENTRO?



*¿Puede el conocimiento ser  
objeto de transferencia?*

Conocimiento  Información  Datos

## ¿Cosa corporal o incorporal?

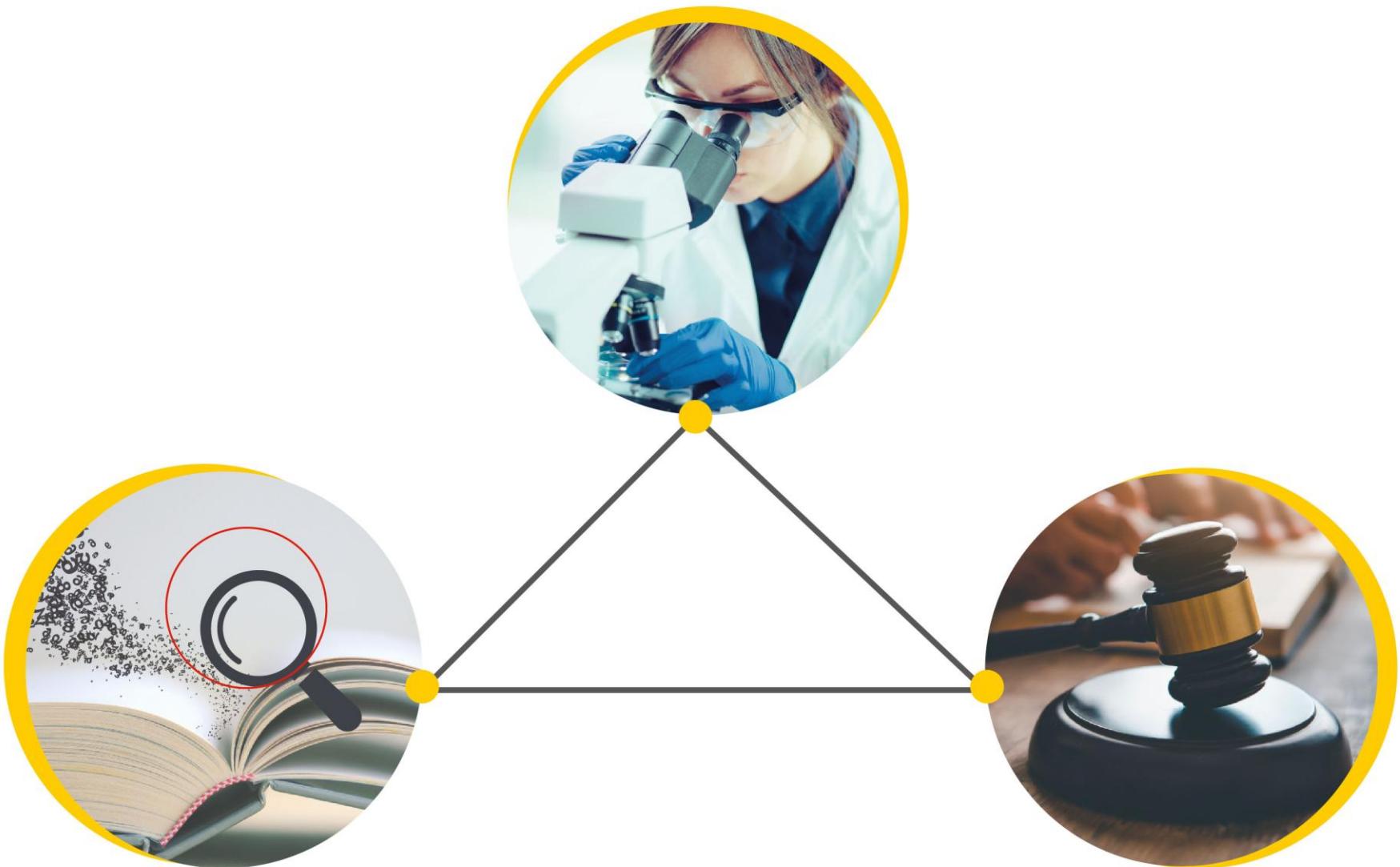


Conocimiento  Soporte

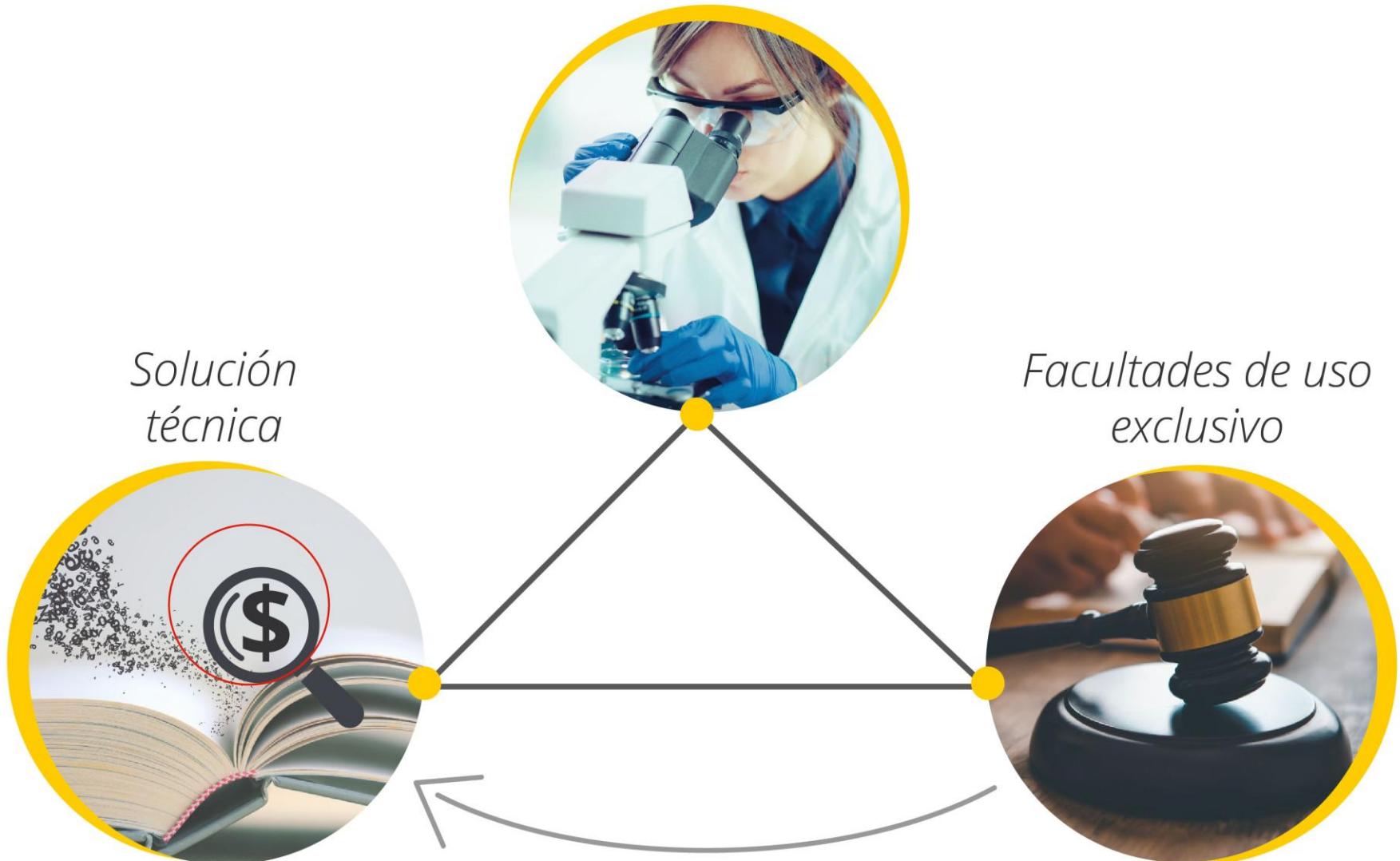
# ¿ES POSIBLE LOGRAR UN ENCUENTRO?



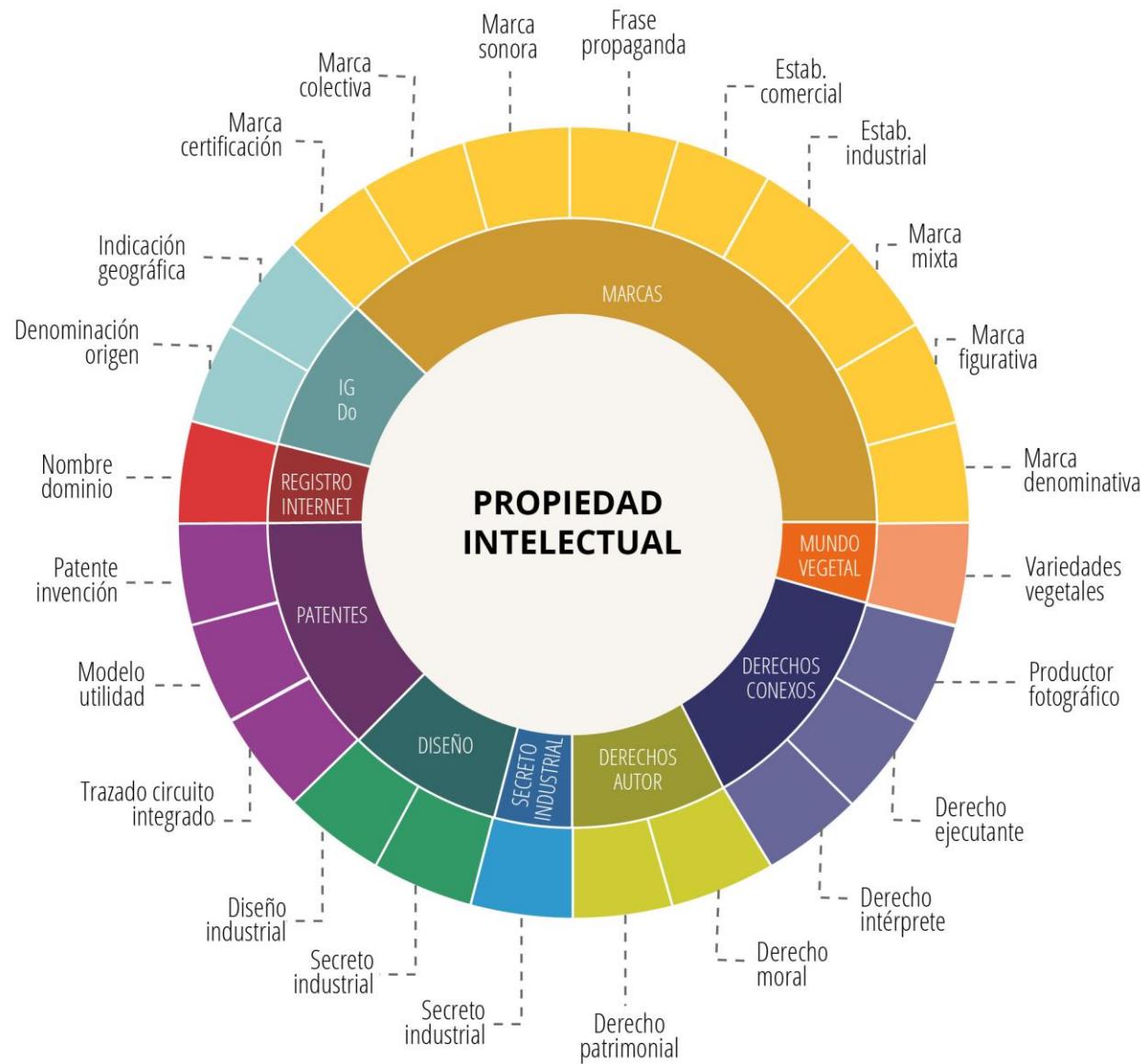
# Sujeto (investigador/a) – Conocimiento – Derecho



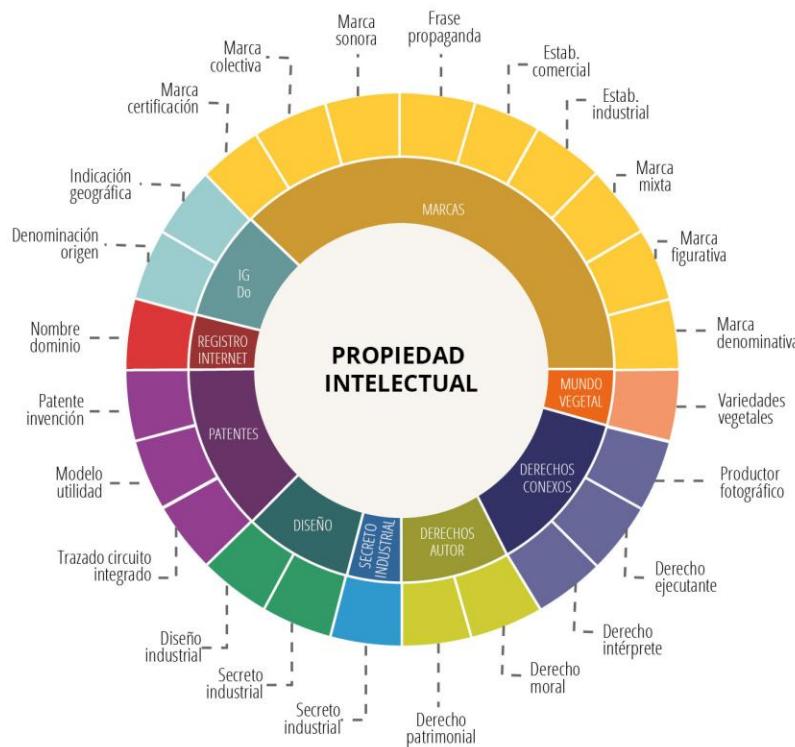
# Sujeto (investigador/a) – Conocimiento – Derecho



## LA "COSA" / OBJETO DE LA TRANSFERENCIA



# SOLUCIÓN TÉCNICA PROTEGIDA POR PI



# TRANSFERENCIA DE TECNOLOGÍA



# ¿QUÉ BUSCA ADQUIRIR EL AGENTE ECONÓMICO?

*¿Está interesado en el conocimiento, la PI o el contrato?*



# ¿QUÉ BUSCA ADQUIRIR EL AGENTE ECONÓMICO?

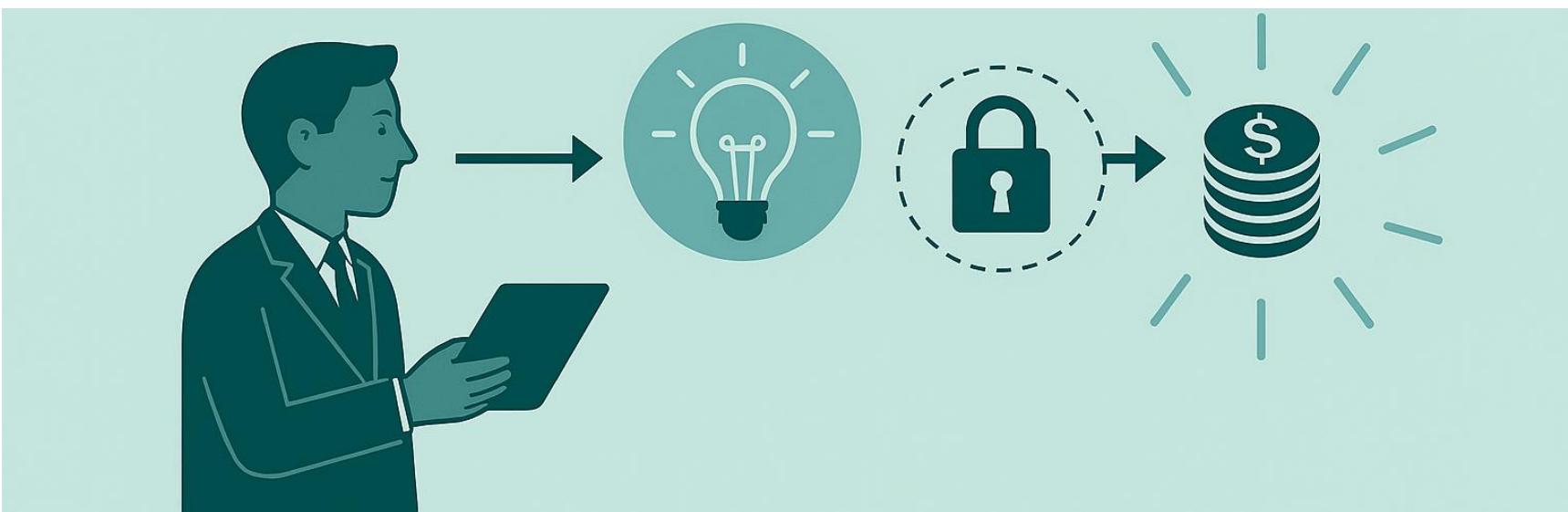
*¿Está interesado en el conocimiento, la PI o el contrato?*



# ¿QUÉ BUSCA ADQUIRIR EL AGENTE ECONÓMICO?

*Ganar **COMPETITIVIDAD***





# LA PROPIEDAD INTELECTUAL ES UN MEDIO, NO UN FIN





¿CÓMO ENTREGAR  
COMPETITIVIDAD A TRAVÉS  
DE HERRAMIENTAS DE PI?

# OBJETIVOS DE LA ACTIVIDAD

- Ampliar el concepto de búsqueda de arte previo y uso de bases de datos.
- Mediante un análisis de caso, inducir una reflexión respecto de cómo la literatura de patentes **apoya la toma de decisiones** en procesos de transferencia tecnológica.
- Se deberán formar grupos de conversación de 4 a 5 personas.



# OBJETIVOS DE LA ACTIVIDAD

- Agenda propuesta:

Presentación  
del caso

Inducción a  
primera reflexión

Trabajo en  
grupo

Discusión

Inducción a  
segunda reflexión

Trabajo en  
grupo

Discusión

Conclusiones  
generales y cierre



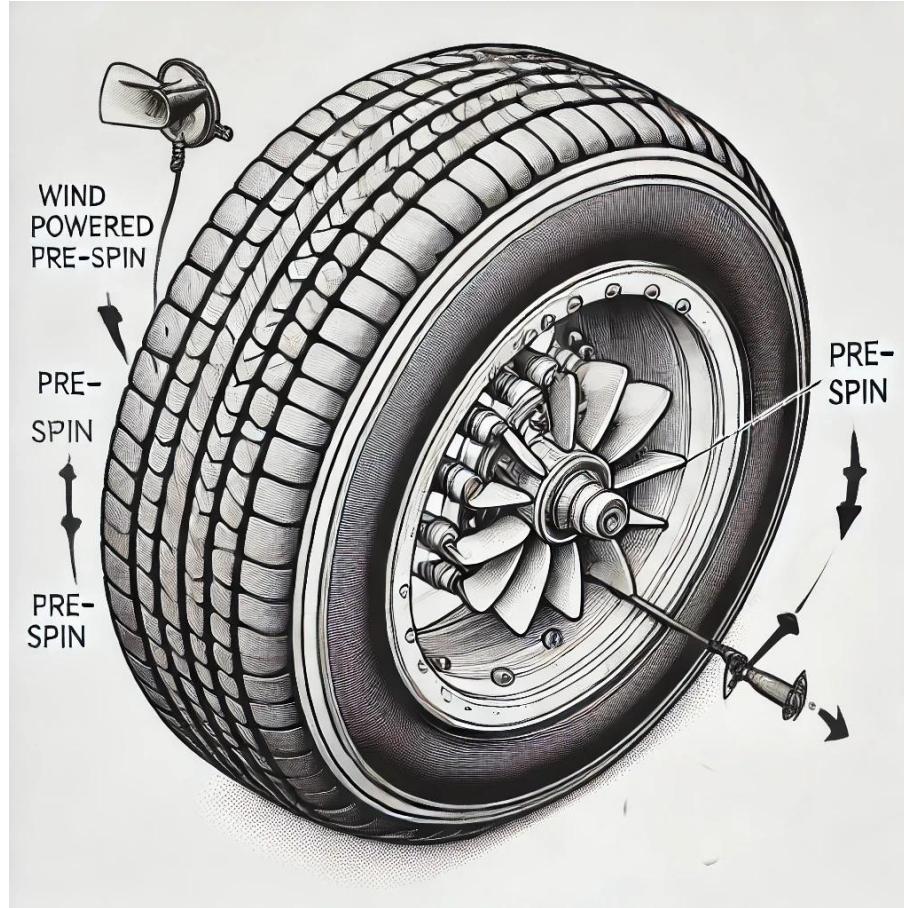
## PRESENTACIÓN DEL CASO:



- En fracción de segundos, los neumáticos deben generar revoluciones proporcionales a la velocidad de los aviones que supera los 200 km/h al aterrizar y su temperatura a valores iguales o mayores a 200°C.
- Debido a temas regulatorios, no es posible apoyarse en medios eléctricos o electrónicos por riesgo de mal funcionamiento.

# PRESENTACIÓN DEL CASO:

## TRENES DE ATERRIZAJE MEJORADOS PARA PREVENIR DESGASTE DE NEUMÁTICOS



## PRIMERA REFLEXIÓN

*Usted es un/a gestor/a tecnológico/a y recibe un documento que describe la tecnología (Reporte de Invención).*

*Usted cuenta con un método para evaluar el potencial de un proyecto dando énfasis a aspectos de protección mediante Propiedad Intelectual.*



## PRIMERA REFLEXIÓN: 7 MINUTOS

Reflexione en relación a los siguientes puntos:

- Factibilidad de ejecutar una búsqueda de **patentes**. ¿Cuál es la información mínima necesaria que debiera tener el Reporte de Invención para realizar dicha búsqueda?
- Factibilidad de determinar el grado de **apropiabilidad de la tecnología**. ¿Cómo construiría un análisis de Propiedad Intelectual?



# DISCUSIÓN

Respecto de la cantidad y calidad de la información...

- Es recomendable chequear si se reportaron todos los resultados.
- Atención con el exceso de información. (Reporte de Invención vs Tesis)
- El Reporte de Invención debe permitir la comprensión y valoración de la tecnología.
- La veracidad de la información es responsabilidad de quién preparó el Reporte de Invención.



# DISCUSIÓN

Respecto de la factibilidad de ejecutar una búsqueda de patentes...

- Es recomendable chequear si el Reporte de Invención reporta de forma clara, completa (pero concisa) y veraz, la información y resultados necesarios.
- El Reporte de Invención provee los primeros indicios de palabras claves para ser usadas en una búsqueda de arte previo.
- Si bien, las bases de datos pagadas son útiles, las herramientas gratuitas permiten realizar un excelente trabajo.
- La búsqueda es un proceso iterativo que va desde lo general a lo particular. Criterio de término: difícil de establecer.
- Dicho proceso iterativo debe alimentarse de nuevas palabras claves, clasificaciones de patentes, datos de solicitantes, etc.

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Latest news  
Thomas Krause appointed USPTO Solicitor  
Mr. Krause brings a depth of experience and expertise to the position and officially starts January 14, 2019.

Public events  
Revised guidance for determining subject matter eligibility  
Guidance aims to improve patent clarity, consistency, and predictability.

Remarks  
USPTO operating status  
Although parts of the federal government have experienced a lapse in

“We have a remarkable patent system, born of our Constitution and steeped in our history. We have a unique opportunity to ensure it meets its full constitutional mandate to promote innovation and [grow our economy](#)”

**WIPO** PATENTSCOPE

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Página inicial > Servicios IP > PATENTSCOPE

Búsqueda simple

PATENTSCOPE permite efectuar búsquedas en 73 millones de documentos de patente, entre los que se cuentan 3.5 millones de solicitudes internacionales de patente PCT publicadas. Para obtener información pormenorizada sobre los datos disponibles, pulse aquí

Oficina:Todas

Ya se puede consultar la publicación del PCT número 02/2019 (10.01.2019). La próxima fecha de publicación se ha programado de la siguiente manera:  
Gaceta número 03/2019 (17.01.2019). [More](#)

Scheme RCL Compilation Catchwords Search

B64C 23/06 • by generating vortices [2006.01]  
 B64C 23/08 • using Magnus effect [2006.01]

**B64C 25/00** **Alighting gear** (air-cushion alighting gear B60V 3/08) [2006.01]

B64C 25/02 • Undercarriages [2006.01]  
 B64C 25/04 • Arrangement or disposition on aircraft [2006.01]  
 B64C 25/06 • fixed [2006.01]  
 B64C 25/08 • non-fixed, e.g. jettisonable [2006.01]  
 B64C 25/10 • retractable, foldable, or the like [2006.01]  
 B64C 25/12 • sideways [2006.01]  
 B64C 25/14 • fore-and-aft [2006.01]  
 B64C 25/16 • Fairings movable in conjunction with undercarriage elements [2006.01]  
 B64C 25/18 • Operating mechanisms [2006.01]  
 B64C 25/20 • mechanical [2006.01]  
 B64C 25/22 • fluid [2006.01]  
 B64C 25/24 • electric [2006.01]  
 B64C 25/26 • Control or locking systems therefor [2006.01]  
 B64C 25/28 • with indicating or warning devices [2006.01]  
 B64C 25/30 • emergency actuated [2006.01]  
 B64C 25/32 • characterised by elements which contact the ground or similar surface (arrester hooks B64C 25/68) [2006.01]  
 B64C 25/34 • wheeled type, e.g. multi-wheeled bogies [2006.01]  
 B64C 25/36 • Arrangements or adaptations of wheels, tyres or axles in general [2006.01]  
 B64C 25/38 • endless-track type [2006.01]  
 B64C 25/40 • the elements being rotated before touch-down [2006.01]  
 B64C 25/42 • Arrangement or adaptation of brakes [2006.01]  
 B64C 25/44 • Actuating mechanisms [2006.01]



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(ti any "Wind\* Wear" OR ta any "Speed Rotation" OR ti any "Tire\* Wheel\*") AND cpc any "B64C25/36"



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Title or abstract any → Group  
 Speed Rotation

Title any → Group  
 Tire\* Wheel\*

CPC any → Group  
 B64C25/36

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## CLASIFICACIÓN INTERNACIONAL DE PATENTES

### CIP

#### B TECNICAS INDUSTRIALES DIVERSAS; TRANSPORTES

##### B24 AERONAVES; AVIACION; ASTRONAUTICA

##### B64C AEROPLANOS; HELICOPTEROS

##### B64C 25/00 Dispositivos de aterrizaje

**B64C 25/40** Siendo comunicado un movimiento rotativo a los elementos antes de la toma de contacto

**B64C 25/10** Retráctiles, abatibles o similares

**B64C 25/36** Disposiciones o adaptaciones de ruedas, neumáticos o ejes, en general

347 results found

List view

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Sort by

Relevance

★ FR2894055A1 Wheel's rotation speed and pressure measuring equipment for e.g. aircraft,...

Available in

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Original document

Bibliographic data

Page 1 /19

RÉPUBLIQUE FRANÇAISE  
INSTITUT NATIONAL  
DE LA PROPRIÉTÉ INDUSTRIELLE  
PARIS  
05 12070

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05 12070  
05 12070

DEMANDE DE BREVET D'INVENTION A1

Demandeur(s) : MESSEY BUGATTI Société anonyme

Date de dépôt : 29.11.05.

Numéro(s) de publication : (la liste que ne pas être communiqué) (la liste que ne pas être communiqué)

Numéro(s) d'enregistrement national : 05 12070

05 12070

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05 12070

□ 4. DEVICE FOR BRAKING AND ROTATING AN AIRCRAFT WHEEL

Patented Feb. 23, 1943

2,312,159

## UNITED STATES PATENT OFFICE

2,312,159

### ROTATING DEVICE FOR AIRCRAFT WHEELS

Anthony Gulotta, Dearborn, Mich.

Application April 12, 1940, Serial No. 229,293

3 Claims. (CL 244—103)

This invention relates to aircraft and in particular to devices used in connection with the landing gear of aircraft.

One object of the invention is to provide means for rotating the landing wheel of aircraft prior to the landing operation, so as to reduce the friction and wear ordinarily arising when such wheels are not rotating as the aircraft reaches the ground.

Another object is to provide an aircraft landing gear including means responsive to the wind for imparting a preliminary rotation of the wheels before the wheels engage the ground in landing.

Another object is to provide an aircraft landing gear including means, such as vanes, operatively connected to the wheel for imparting a preliminary rotation to the wheel so that there will be little relative motion between the periphery of the wheel and the ground when these come into engagement upon landing, thereby reducing the wear upon the tires and accordingly effecting a reduction in accidents due to blowouts of the tires arising from such causes.

Another object is to provide an aircraft wheel structure including vanes or blades adapted to be engaged by the wind so as to impart a preliminary rotation of the wheel structure before landing, these vanes or blades being secured to the wheel in the vicinity of the rim so that the vanes or blades not only rotate the wheel when acted upon by the wind but also deflect a portion of the air into the brake mechanism within the wheel, thereby providing an additional cooling action upon the brake mechanism and increasing the life and efficiency thereof.

Another object is to provide an aircraft landing wheel structure, particularly for use with retractable landing gears, including means whereby the wheel is given a preliminary rotation in response to the action of the wind encountered as soon as the wheel emerges from its compartment in the aircraft, the rotative action of the wind or air being removed when the wheel is again retracted into its compartment.

Another object is to provide an aircraft landing wheel structure wherein means, such as vanes or blades, are secured to or molded into the tires themselves so that a direct rotative action is applied to the tires by the wind as the aircraft lands.

In the drawing:

Figure 1 is a side elevation of an aircraft landing wheel structure according to a preferred embodiment of the invention.

Figure 2 is a front elevation of the landing wheel structure shown in Figure 1.

Figure 3 is a central vertical section along the irregular line 3—3 in Figure 1.

Figure 4 is a fragmentary cross section through one of the vanes or blades, taken along the line 4—4 in Figure 1.

Figure 5 is a fragmentary side elevation of a modification wherein the blades or vanes are secured or molded directly to the tire of the wheel.

#### General arrangement

In general, the aircraft landing wheel structure of this invention consists of means, such as blades or vanes, connected to the wheel or tire in such a manner as to be acted upon by the wind encountered as the aircraft flies through the air. This relative motion thus applied to the wheel or tire imparts a preliminary rotation thereto so that the wheel is rotating as it encounters the ground in landing.

Hitherto the tires of aircraft landing wheels have been subject to severe wear beyond the amount expected to be normally caused by the mere rolling of the wheel down the runway of the airport. This abnormal wear does not occur during taking off but only upon landing. It arises by reason of the fact that the wheel is substantially stationary when it encounters the ground or runway in landing, whereas it is moving relatively to the ground at a high rate of speed, such as up to 75 or more miles per hour. The sudden impact of a stationary wheel with the ground at such a high relative speed between the wheel and the ground causes the periphery of the tire to be dragged over the ground until the inertia of the landing wheel structure can be overcome and the wheel rotated until its peripheral speed is the same as the relative speed existing between the wheel and the ground.

Until this quality of relative speed is reached, however, the tire, in effect, is skidding along the ground with somewhat the same result as when the rotation of the wheels of an automobile is suddenly stopped by locking the brakes while the automobile is moving at a high rate of speed. In either case, the friction suddenly exerted between the tire and the ground wears off a considerable layer of the rubber and makes a long skid mark on the ground. In a like manner, the sudden impact of an airplane wheel with the airport runway during landing creates similar friction, similar wear, and a similar skid mark upon the runway.

This wear, moreover, is not only bad in itself, but also is dangerous because it makes the tire of uncertain value upon a subsequent landing.

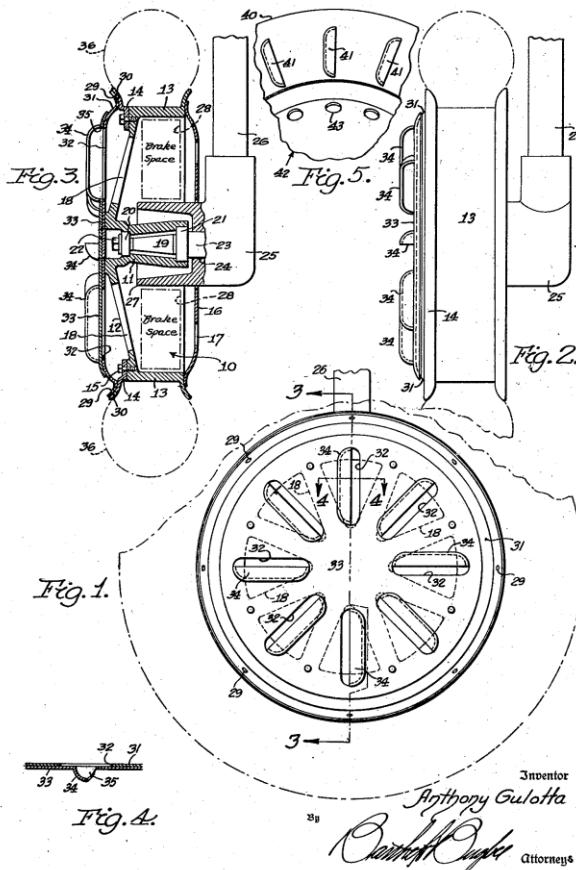
Feb. 23, 1943.

A. GULOTTA

2,312,159

ROTATING DEVICE FOR AIRCRAFT WHEELS

Filed April 12, 1940





(12) **United States Patent**  
Davis

(10) **Patent No.:** US 11,260,967 B1  
(45) **Date of Patent:** Mar. 1, 2022

(54) **NO/LOW SKID DEVICE**

(71) **Applicant:** James Robert Davis, Riverside, CA (US)

(72) **Inventor:** James Robert Davis, Riverside, CA (US)

(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) **Appl. No.:** 16/122,144

(22) **Filed:** Dec. 3, 2018

**Related U.S. Application Data**

(60) Provisional application No. 62/597,291, filed on Dec. 11, 2017.

(51) **Int. Cl.**

B64C 25/40 (2006.01)  
B64C 25/36 (2006.01)  
B60B 7/00 (2006.01)

(52) **U.S. Cl.**

CPC ..... B64C 25/40 (2013.01); B64C 25/36 (2013.01); B60B 7/0013 (2013.01); B60Y 2200/51 (2013.01)

(58) **Field of Classification Search**

CPC ..... B64C 25/40  
See application file for complete search history.

(56) **References Cited**

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244/103 S  
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244/103 R

(Continued)

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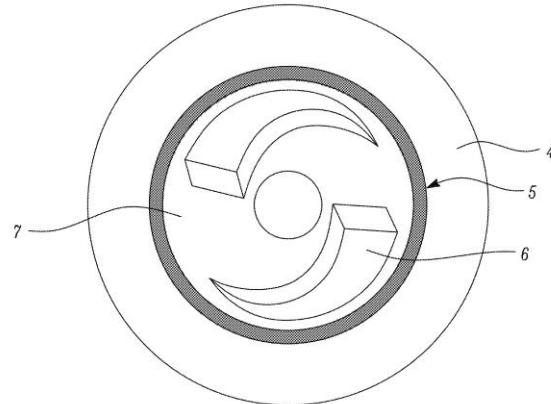
DE 102013020547 A1 \* 6/2015 ..... B64C 25/40

*Primary Examiner* — Richard G Davis

(57) **ABSTRACT**

An aircraft hubcap/wheel cover which uses ambient airflow (120 mph-175 mph) to rotate wheels on the landing gear of an aircraft accomplished by using slightly protruding slats, blades, scoops or other air capturing shapes, (once the landing gear has been lowered). These air capturing shapes are integrated as part of the hubcap/wheel cover during manufacture and are directly determined by ground speed applicable to that aircraft with the ultimate purpose being tire longevity. The wheel cover hubcap is a single piece design and has no moving parts.

**3 Claims, 2 Drawing Sheets**



**FIG. 2**

## DISCUSIÓN

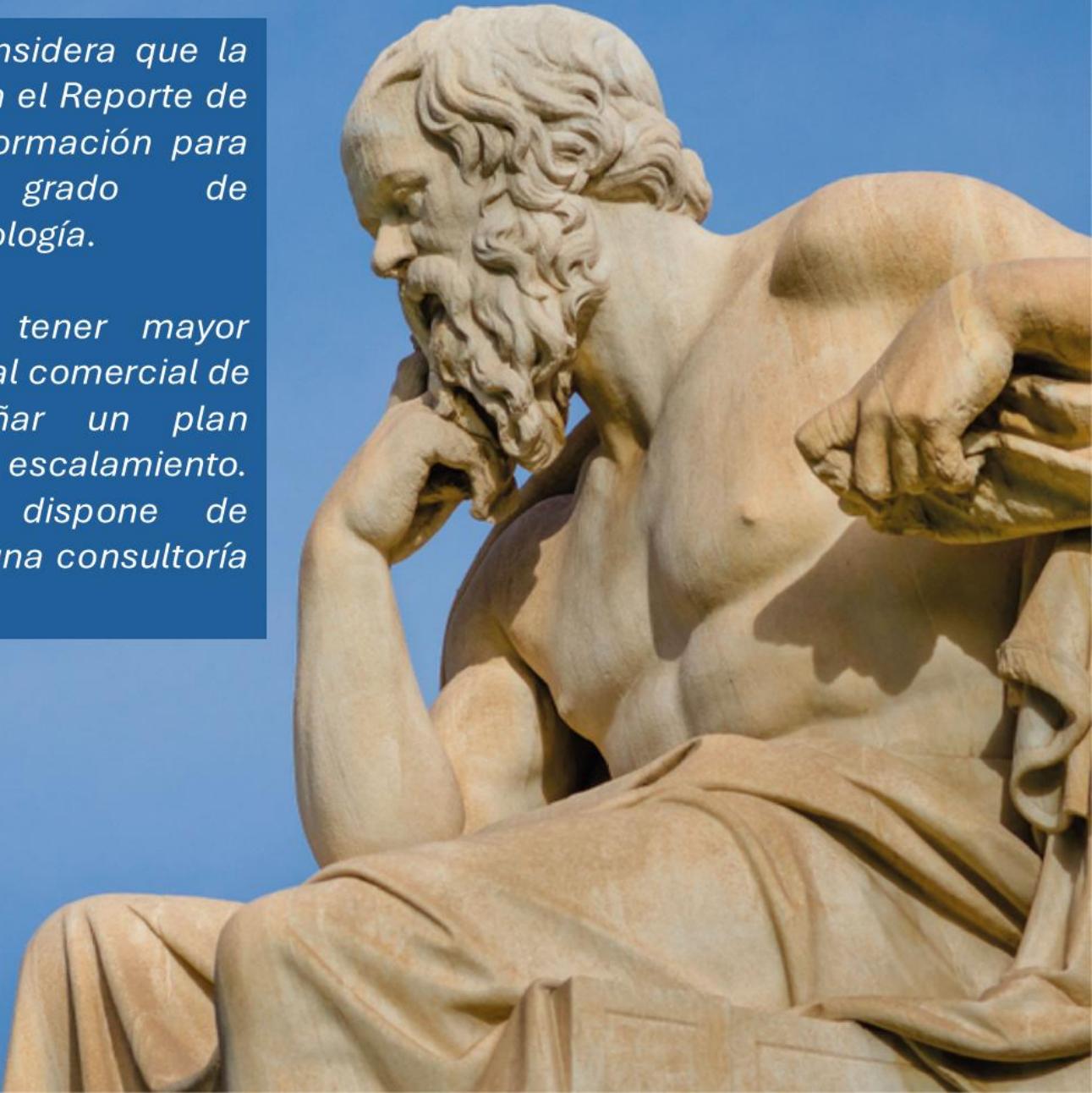
Respecto de la factibilidad de determinar el grado de apropiabilidad de la tecnología y bajo qué herramientas de Propiedad Intelectual...

- Pensar en términos de portafolios de protección. ¿Patente? ¿Secreto? ¿Otro?
- El análisis de la información provista en el Reporte de Invención derivaría en conclusiones del tipo:
  - La invención provista no es patentable.
  - La patentabilidad deberá recaer sobre aspectos más específicos de la invención, aun cuando éstos podrían no estar desarrollados.

## SEGUNDA REFLEXIÓN

*“Como vimos, usted considera que la información contenida en el Reporte de Invención le entrega información para determinar cierto grado de patentabilidad de la tecnología.*

*Sin embargo, quisiera tener mayor claridad sobre el potencial comercial de la misma para diseñar un plan estratégico de escalamiento. Lamentablemente, no dispone de recursos para contratar una consultoría especializada.”*



## SEGUNDA REFLEXIÓN: 8 MINUTOS

Reflexione en relación a los siguientes puntos:

- **Características comerciales a partir del Reporte de Invención.** ¿Qué información debiera proporcionar el Reporte de Invención para apoyar un análisis desde una mirada comercial?
- **Herramientas disponibles para evaluar el potencial comercial de la tecnología.** ¿Qué tipo de datos utilizaría en base de datos de patentes para evaluar potencial comercial?
- **Eventuales cambios de enfoque en materia de patentabilidad.** La información sobre potencial de mercado ¿puede cambiar el enfoque de una solicitud de patente?



# DISCUSIÓN

Respecto de la información complementaria que se puede extraer desde el Reporte de Invención para apoyar el análisis estratégico y comercial...

- Coloque atención no solo a los productos, sino además a procesos y dispositivos utilizados en dichos procesos.
- Referencias a empresas o personas informadas por los investigadores pueden llegar a ser de suma importancia.
- Evalúe más de un posible ámbito de aplicación, buscando el mayor impacto comercial de la invención.



# DISCUSIÓN

Respecto de las herramientas disponibles para evaluar el potencial comercial de la tecnología...

- Si bien, puedo contratar servicios especializados, para un primer análisis son útiles las mismas bases de datos anteriores.
- No es complejo determinar quiénes son los actores relevantes del mercado tanto a nivel de empresas como de inventores.
- No es complejo determinar cuáles son mercados interesantes para la tecnología: ¿cómo ayuda la clasificación internacional de patentes?



Home > International Patent Classification > IPC Publication

Scheme RCL Compilation Catchwords Search

**B** **PERFORMING OPERATIONS; TRANSPORTING**  
**TRANSPORTING**

**B64** **AIRCRAFT; AVIATION; COSMONAUTICS**  
**B64C** **AEROPLANES; HELICOPTERS**

[Aircraft structures or fairings](#)

**B64C 1/00** Fuselages; Constructional features common to fuselages, wings, stabilising surfaces or the like [2006.01]  
**B64C 3/00** Wings (ornithopter wings B64C 33/02) [2006.01]  
**B64C 5/00** Stabilising surfaces [2006.01]  
**B64C 7/00** Structures or fairings not otherwise provided for [2006.01]  
**B64C 9/00** Adjustable control surfaces or members, e.g. rudders (trimming stabilising surfaces B64C 5/10) [2006.01]  
**B64C 11/00** Propellers, e.g. of ducted type; Features common to propellers and rotors for rotorcraft [2006.01]  
**B64C 13/00** Control systems or transmitting systems for actuating flying-control surfaces, lift-increasing flaps, air brakes, or spoilers [2006.01]  
**B64C 15/00** Attitude, flight direction or altitude control by jet reaction [2006.01]  
**B64C 17/00** Aircraft stabilisation not otherwise provided for [2006.01]  
**B64C 19/00** Aircraft control not otherwise provided for [2006.01]  
[Influencing air flow over aircraft surfaces, not otherwise provided for](#)

**B64C 21/00** Influencing air flow over aircraft surfaces by affecting boundary layer flow [2023.01]  
**B64C 23/00** Influencing air flow over aircraft surfaces, not otherwise provided for [2006.01]  
**B64C 25/00** Alighting gear (air-cushion alighting gear B60V 3/08) [2006.01]  
**B64C 25/02** Undercarriages [2006.01]  
**B64C 25/32** characterised by elements which contact the ground or similar surface (arrester hooks B64C 25/68) [2006.01]  
**B64C 25/34** wheeled type, e.g. multi-wheeled bogies [2006.01]  
**B64C 25/38** endless-track type [2006.01]  
**B64C 25/40** the elements being rotated before touch-down [2006.01]  
**B64C 25/42** Arrangement or adaptation of brakes [2006.01]  
**B64C 25/44** Actuating mechanisms [2006.01]  
**B64C 25/50** Steerable undercarriages; Shimmy-damping [2006.01]  
**B64C 25/52** Skis or runners [2006.01]  
**B64C 25/54** Floats [2006.01]  
**B64C 25/58** Arrangements or adaptations of shock-absorbers or springs (shimmy-dampers B64C 25/50) [2006.01]

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26,388	26,388	25,636	15,835	17,841	115,364

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Title	Identifiers	Family	Filed	Published	Applicants
Two-way hydraulic locking mechanism for front helicopter wheel of helicopter	<a href="#">002-416-318-900-749</a> <a href="#">CN 111532422 A</a>	2s / 2ex	Apr 17, 2020	Aug 14, 2020	Guizhou Xinan Aviation Machinery Co Ltd
Drone-enabled substance collection system	<a href="#">002-820-458-655-620</a> <a href="#">US 10877477 B1</a>	5s / 5ex	Mar 14, 2018	Dec 29, 2020	Hana Resources Inc
método e sistema para determinar coeficiente de atrito <109> para um evento de aterrissagem de aeronave	<a href="#">001-020-630-876-635</a> <a href="#">BR 112013023742 A2</a>	16s / 16ex	Mar 16, 2012	Dec 13, 2016	Messier Dowty Ltd
A unmanned aerial vehicle for air monitoring	<a href="#">003-219-809-680-502</a> <a href="#">CN 207292410 U</a>	1s / 1ex	Oct 23, 2017	May 1, 2018	Univ Southwest
Einrichtung zur Verriegelung eines seitlich ausschwenkbaren Flugzeugsponnes oder -spornrades in der Mittellage	<a href="#">006-424-625-768-958</a> <a href="#">DE 732485 C</a>	1s / 1ex	Apr 4, 1939	Mar 5, 1943	Henschel Flugzeugwerke Ag
Folding undercarriage and unmanned aerial vehicle	<a href="#">002-625-427-144-824</a> <a href="#">CN 212243797 U</a>	1s / 1ex	May 29, 2020	Dec 29, 2020	Zhuhai Sv Tech Co Ltd
Train d'atterrisseage	<a href="#">005-026-035-626-052</a>	3s / 3ex	Jan 24, 2018	Mar 27, 2020	Safran Electrical & Power

<b>2,914</b> B64C25/00 Performing Operations transporting Alighting gear air-cushion alighting gear	<b>3,540</b> B64C25/10 Performing Operations transporting retractable, foldable, or the like	<b>2,921</b> B64C25/32 Performing Operations transporting characterised by elements which contact the ground or	<b>2,934</b> B64C25/34 Performing Operations transporting wheeled type, e.g. multi-wheeled bogies	<b>2,509</b> B64C25/36 Performing Operations transporting Arrangements or adaptations of wheels, tyres or axles in
<b>2,489</b> B64C25/40 Performing Operations transporting the elements being rotated before touch-down	<b>3,913</b> B64C25/42 Performing Operations transporting Arrangement or adaptation of brakes	<b>2,373</b> B64C25/44 Performing Operations transporting Actuating mechanisms	<b>2,418</b> B64C25/50 Performing Operations transporting Steerable undercarriages Shimmy-damping	<b>3,078</b> B64C25/58 Performing Operations transporting Arrangements or adaptations of shock-absorbers or springs
<b>2,639</b> B64C25/60 Performing Operations transporting Oleo legs	<b>6,662</b> B64C25/62 Performing Operations transporting Spring shock-absorbers Springs	<b>2,845</b> B64C27/08 Performing Operations transporting with two or more rotors	<b>4,221</b> B64C39/02 Performing Operations transporting characterised by special use	<b>2,266</b> B64D47/08 Performing Operations transporting Arrangements of cameras

Aparentemente, la industria está trabajando en tecnologías diversas a la propuesta en la invención

<b>+ B64C 25/02</b>	Undercarriages [2006.01]
<b>- B64C 25/32</b>	• characterised by elements which contact the ground or similar surface (arrester hooks B64C 25/68) [2006.01]
<b>+ B64C 25/34</b>	• wheeled type, e.g. multi-wheeled bogies [2006.01]
<b>B64C 25/38</b>	• endless-track type [2006.01]
<b>B64C 25/40</b>	• the elements being rotated before touch-down [2006.01]
<b>+ B64C 25/42</b>	• Arrangement or adaptation of brakes [2006.01]
<b>B64C 25/50</b>	• Steerable undercarriages; Shimmy-damping [2006.01]
<b>B64C 25/52</b>	• Skis or runners [2006.01]
<b>+ B64C 25/54</b>	• Floats [2006.01]
<b>- B64C 25/58</b>	• Arrangements or adaptations of shock-absorbers or springs (shimmy-dampers B64C 25/50) [2006.01]
<b>B64C 25/60</b>	• Oleo legs [2006.01]
<b>+ B64C 25/62</b>	• Spring shock-absorbers; Springs [2006.01]
<b>- B64C 39/00</b>	<b>Aircraft not otherwise provided for [2023.01]</b>
	B64C 39/02     • characterised by special use [2023.01]

Top Applicants

246 Airbus France	184 Airbus Helicopters	1,178 Airbus Operations LTD	538 Airbus Operations Sas	179 Bell Helicopter Textron INC
1,200 Boeing Co	240 Borealis Tech LTD	201 Dunlop Rubber Co	1,601 Goodrich Corp	190 Goodyear Tire & Rubber
242 Honeywell Int INC	707 Messier Bugatti	925 Messier Bugatti Dowty	418 Messier Dowty LTD	253 Messier Dowty Sa
399 Messier Hispano Sa	994 Safran Landing Systems	183 Safran Landing Systems Canada INC	442 Safran Landing Systems UK LTD	216 Xian Aviation Brake Tech Co LTD
>1,463.5				

**381**  
B64C25/42  
Performing Operations  
transporting  
Arrangement or  
adaptation of brakes

**317**  
B64C25/60  
Performing Operations  
transporting  
Oleo legs

**225**  
B64C25/42  
Performing Operations  
transporting  
Arrangement or  
adaptation of brakes

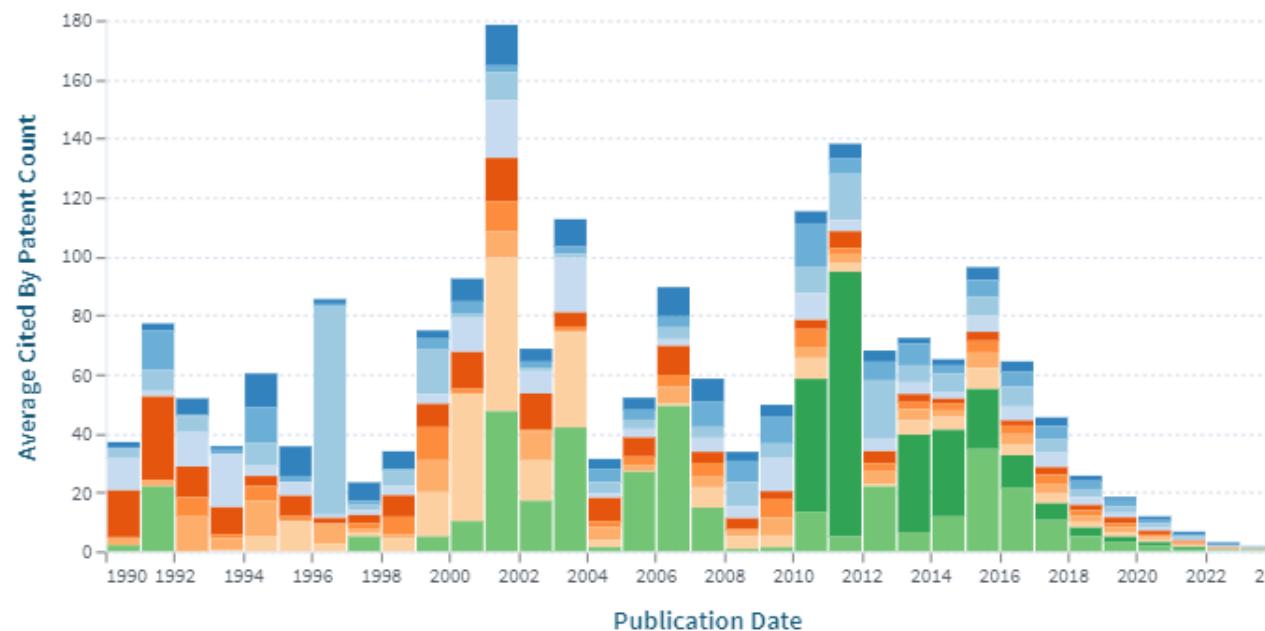
**197**  
B64C25/34  
Performing Operations  
transporting  
wheeled type, e.g.  
multi-wheeled bogies

**371**  
B64C25/40  
Performing Operations  
transporting  
the elements being  
rotated before touch-  
down

**221**  
B64C25/42  
Performing Operations  
transporting  
Arrangement or  
adaptation of brakes

Aparentemente, la industria  
está trabajando en  
tecnologías diversas a la  
propuesta en la invención

## Averaged Cited by Patents per Year



- Las clasificaciones que originalmente se utilizaron para la búsqueda inicial no están dentro de las relevantes para la industria.
- El problema “trenes de aterrizaje” fue estudiado en la década del 90.
- En los 2000, el desarrollo tecnológico se movió a la absorción de impacto durante el aterrizaje.
- En la década del 2010, la problemática se movió a la industria de los helicópteros.
- Transversalmente, las aeronaves previstas para otros usos ha sido un tema recurrente en la industria.

### Top Applicants for B64C39/02

271	487	710	336	604
Aeronext INC	Aerovironment INC	Amazon Tech INC	Autel Robotics Co LTD	Boeing Co
235	241	246	414	229
Ford Global Tech LLC	Gopro INC	Honeywell Int INC	Ibm	Intel Corp
229	313	238	262	225
Korea Aerospace Res Inst	Qualcomm INC	Samsung Electronics Co LTD	Skydio INC	Sony Corp
264	1,995	364	660	303
State Grid Corp China	Sz Dji Technology Co LTD	Walmart Apollo LLC	Wing Aviation LLC	エスゼット ディー ジェイアイ テクノロジー カンパニー リミテッド s z d j i t e c h n o l o g y c o . , l t d

-	<b>B64C 27/00</b>	<b>Rotorcraft; Rotorcrafts peculiar thereto [2006.01]</b>
	B64C 27/02	• Gyroplanes [2006.01]
-	B64C 27/04	• Helicopters [2006.01]
	B64C 27/06	• with single rotor [2006.01]
+	B64C 27/08	• with two or more rotors [2023.01]

# DISCUSIÓN

Eventuales cambios de enfoque en materia de patentabilidad...

- El análisis de la literatura de patentes permite enriquecer el análisis global del desarrollo de la tecnología, especialmente, si el titular del invento quisiera seguir explorando aplicaciones más específicas de su invención.
- ELEGIR ADECUADAMENTE EL PROBLEMA TÉCNICO A RESOLVER. Aparentemente, el problema de rotar las ruedas del avión previo a su aterrizaje ya ha sido abordado en el pasado y no es un desafío que la industria esté explorando. Hipótesis alternativas:
  - La fricción ocurrida en el proceso de frenado es útil para frenar el avión.
  - El beneficio de agregar elementos técnicos al tren de aterrizaje se contrarresta con el perjuicio en términos de mantención y seguridad.
  - El daño sobre los neumáticos en el proceso de frenado no representa un costo relevante para la industria y su corrección no resuelve el problema en la circularidad del uso de neumáticos.
  - Otras.
- Explorar aplicaciones de la invención en procesos de frenado del avión y en procesos de amortiguación del aterrizaje que, aparentemente, son problemas que la industria ha abordado más recientemente.
- Explorar aplicaciones de la invención en otro tipo de vehículo aéreos como drones.

## REFLEXIÓN FINAL

- ¿Qué ocurrió en realidad?
- Se debe **ampliar la mirada** en relación a la información contenida en las bases de datos de patentes. No solo es útil para determinar la patentabilidad, sino que apoya la toma de decisiones de un gestor tecnológico para generar una oferta tecnológica que aumente la **COMPETITIVIDAD**.



# WIN WIN



A man with dark hair and a beard, wearing a light blue and white striped long-sleeved shirt, is shown from the waist up. He is looking upwards and to the right with a thoughtful expression, his right hand resting against his chin and his left arm crossed over his chest.

/Carey

A woman with long dark hair, wearing a denim jacket over a white top, is shown from the waist up. She is looking upwards and to the right with a thoughtful expression, her right hand resting against her chin and her left arm crossed over her chest.

¡PREGUNTAS?