
HOW INPI IS SUPPORTING AND FOSTERING INNOVATION IN THE AI FIELD?

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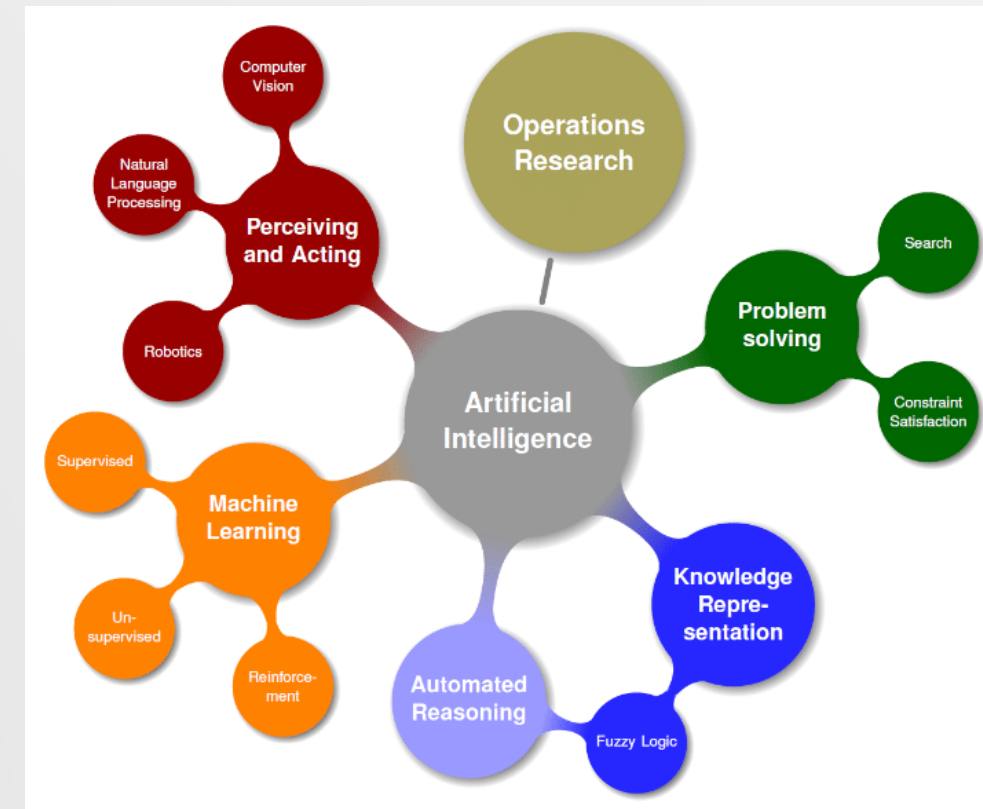
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NECESSITY OF CLARIFICATION

- ▶ What is Artificial Intelligence ? Broad and narrow definitions
- ▶ INPI is a leading partner whose goal is to explain, define and categorize all AI technologies spectrum
- ▶ Definition used in guidelines :

https://www.inpi.fr/sites/default/files/guidelines_for_patent_examination.pdf

- ▶ « Artificial intelligence is the set of theories and techniques used to create computer programs, calculation models and algorithms that allow machines to reproduce a form of intelligence. »



Artificial intelligence diagram

From Mehra et al..(2020). Detection of Offensive Language in Social Media Posts



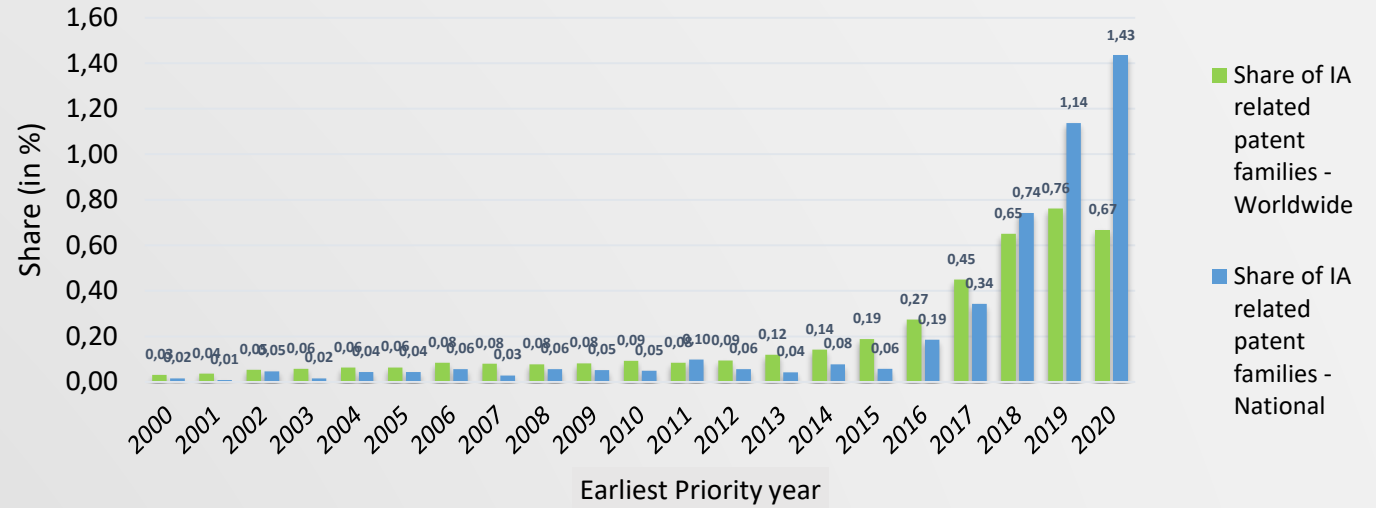
2 AI - TREND MONITORING

- ▶ **Taskforce created in the office :**
 - ▶ Case law monitoring
 - ▶ High-level bilateral discussions with other IP offices
 - ▶ AI events participation (WIPO Conversation on Intellectual Property, Frontier Technologies)
 - ▶ Discussions with patent associations
 - ▶ Discussions with economic stakeholders

- ▶ **Point out key questions about AI inventions and evolution of practices, tools, guidances**

▶ AI statistics for various state organisations

Worldwide and national share of AI-related patent families



Applicant region	Entity categorization	Total	Earliest priority date																				
			2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Region A	Technology Services	4356	19	12	13	9	16	11	9	28	36	34	28	48	71	112	183	311	397	687	776	869	687
Region B	Technology Services	2766	24	43	28	69	87	94	141	122	57	53	81	73	35	77	134	179	248	303	390	343	185
Region B	Technology Hardware	1606	0	0	9	11	7	14	2	10	3	4	4	5	21	16	40	69	123	197	323	358	390
Region A-B	Tech Hardware & Semiconductors	1551	0	0	0	9	8	6	6	39	10	39	62	55	73	93	92	116	171	199	186	190	197
Region C	Consumer Discretionary	1273	0	0	0	0	0	0	0	1	0	0	2	3	10	22	34	52	105	211	348	432	
Region C-A	Technology Services	1219	0	0	0	0	0	0	0	0	1	1	10	6	8	6	26	53	104	167	153	684	
Region D	Technology Hardware	1122	1	1	4	0	2	7	5	5	8	2	2	10	6	13	37	76	111	350	170	162	150
Region E	Asset Management	897	0	0	0	0	0	0	0	0	0	0	0	3	3	5	5	9	23	265	386	198	
Region F	Institutional Financial Services	856	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9	24	254	312	256	
Region A	University	849	0	0	3	0	0	0	2	1	0	2	0	10	31	52	93	114	98	137	159	103	44
Applicant region	Entity application	Total	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Region G	Internet Media & Services	672	0	0	0	0	0	1	1	4	3	1	7	33	58	25	40	58	142	80	112	64	43
Region E	Automobile	645	0	1	1	0	0	3	8	3	4	17	4	16	11	11	12	17	24	51	99	153	210
Region F	Telecommunications	623	5	3	4	6	2	7	3	8	4	20	14	16	15	8	18	19	41	55	123	113	139
Region G	Software & Tech Services	621	1	2	1	0	2	4	5	8	19	2	6	10	10	13	24	29	64	87	92	125	117
Region E	Diversified Industrials	619	2	3	4	8	8	10	9	11	8	7	14	11	22	19	23	27	44	78	96	101	114
Region B	Aerospace & Defense	570	0	0	1	1	0	2	2	3	0	0	0	1	1	0	2	9	16	53	112	199	168
Region A-B	Internet Media & Services	569	0	0	0	0	0	0	0	0	0	0	0	0	2	8	2	3	17	70	116	174	177
Region B	Electric services	563	0	0	0	0	2	0	1	4	2	2	0	3	3	9	22	9	35	73	101	107	190
Region A	E-Commerce	515	0	0	0	0	0	0	0	0	0	1	4	1	3	4	7	25	36	86	114	111	123
Region C-A	Health Care	491	0	0	0	0	0	0	0	1	3	2	3	4	7	6	12	20	41	77	94	101	120

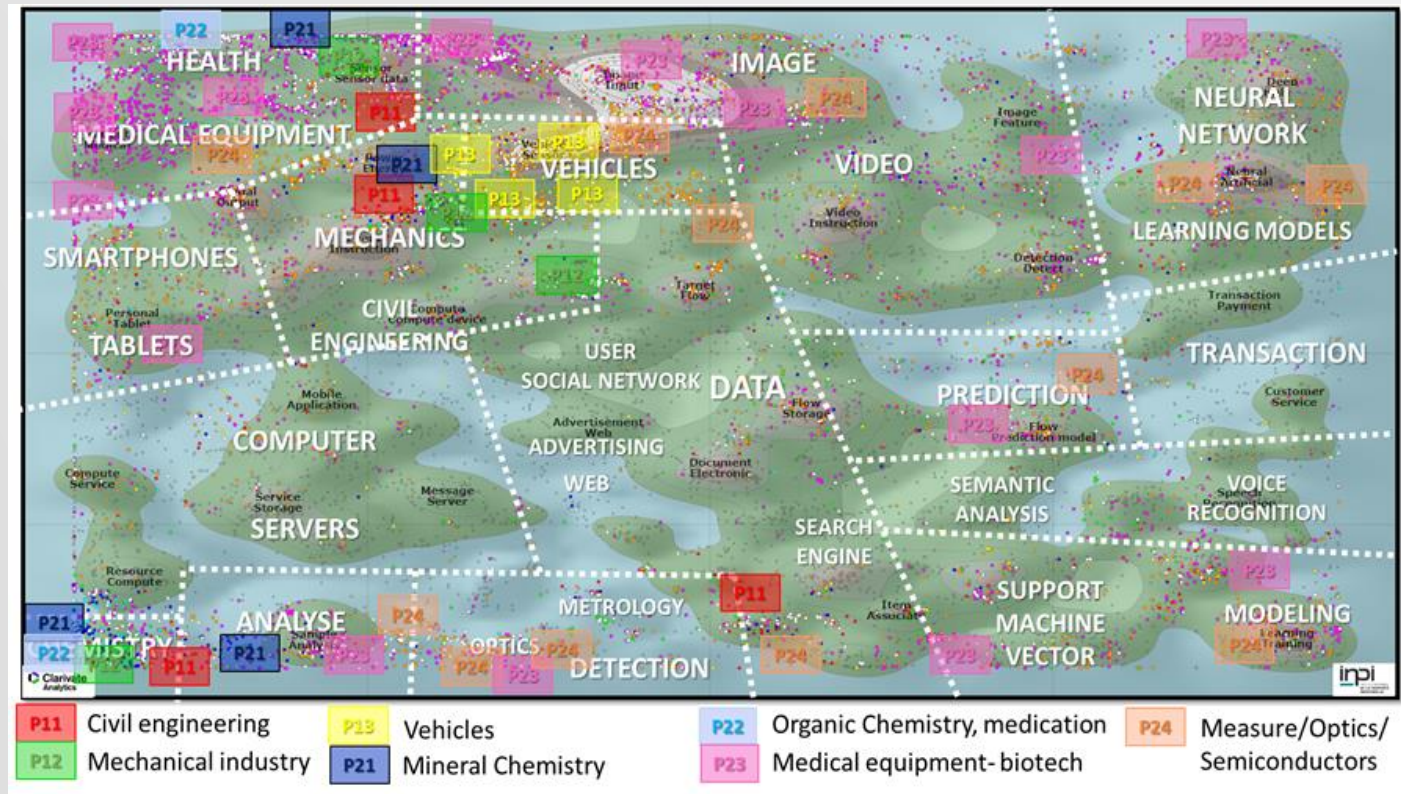
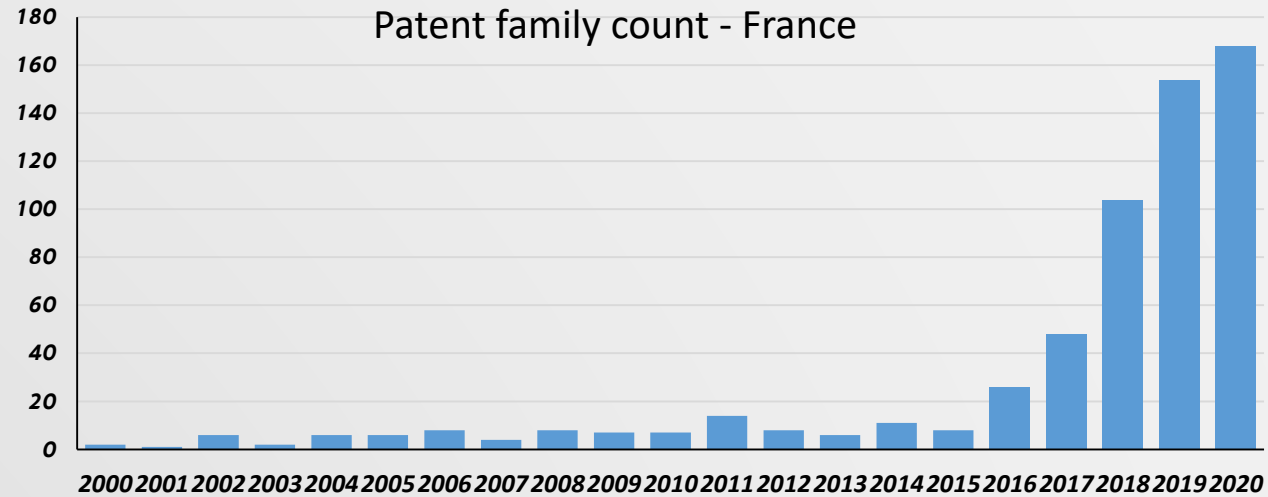
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AI - ORGANIZATION ASPECTS

▶ Increased of AI patents workload

▶ AI is impacting all technological fields

▶ AI expertise decentralized in all examination divisions



AI - IMPLEMENTATION IN THE IP OFFICES

- ▶ Automatic pre-classification of incoming patent application :
In-house developed AI software to assign patent applications to the right examination unit
- ▶ AI-assisted examination tool developed :
 - ▶ by a dedicated team at the office (sufficiency of disclosure, reference documents)
 - ▶ In collaboration with national actors in IA search or university
- ▶ Benchmark and tests of patent prior art search tools

AI GUIDELINES

▶ Definition used in guidelines :

https://www.inpi.fr/sites/default/files/guidelines_for_patent_examination.pdf

- ▶ “Artificial intelligence is the set of theories and techniques used to create computer programs, calculation models and algorithms that allow machines to reproduce a form of intelligence.”
- ▶ Artificial intelligence, to the extent that it is based on computational models, is considered by definition to be a computer-implemented mathematical method which, when claimed as such, does not constitute an invention under Article L.611-10, paragraphs 2 and 3.
- ▶ The use of expressions such as: “support vector machine (SVM)”, “genetic algorithm”, “artificial neural network (ANN)” or “automatic/deep learning” is not sufficient in itself to confer a technical character to the claimed subject matter. A contribution can be made to the technical character of an invention by providing a technical solution to a technical problem by non-generic technical means or by processing measured technical data
- ▶ Discussions with various IP associations : sufficiency of disclosure, definition of the person skilled in the art...



**THANK
YOU!**