

How to Justify Your Patent Budget

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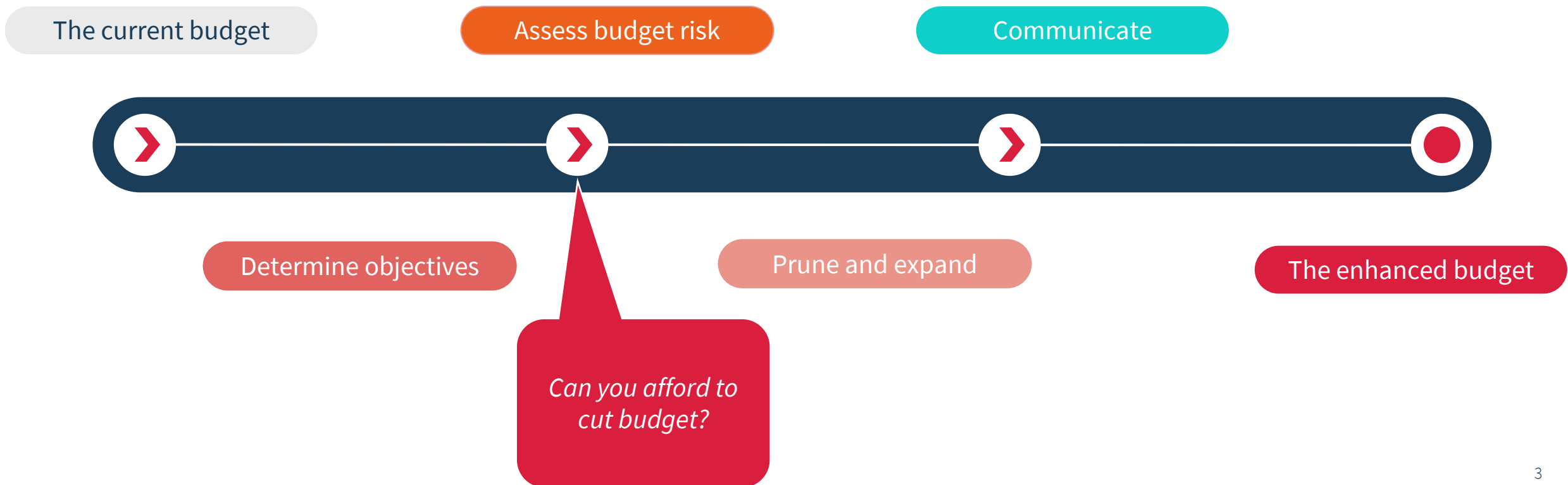


CIPHER

Agenda

- Define your budget objectives
- Model the impact of budget changes to revenue risk
- Prune surplus patents
- Communicate budget plan to Stakeholders

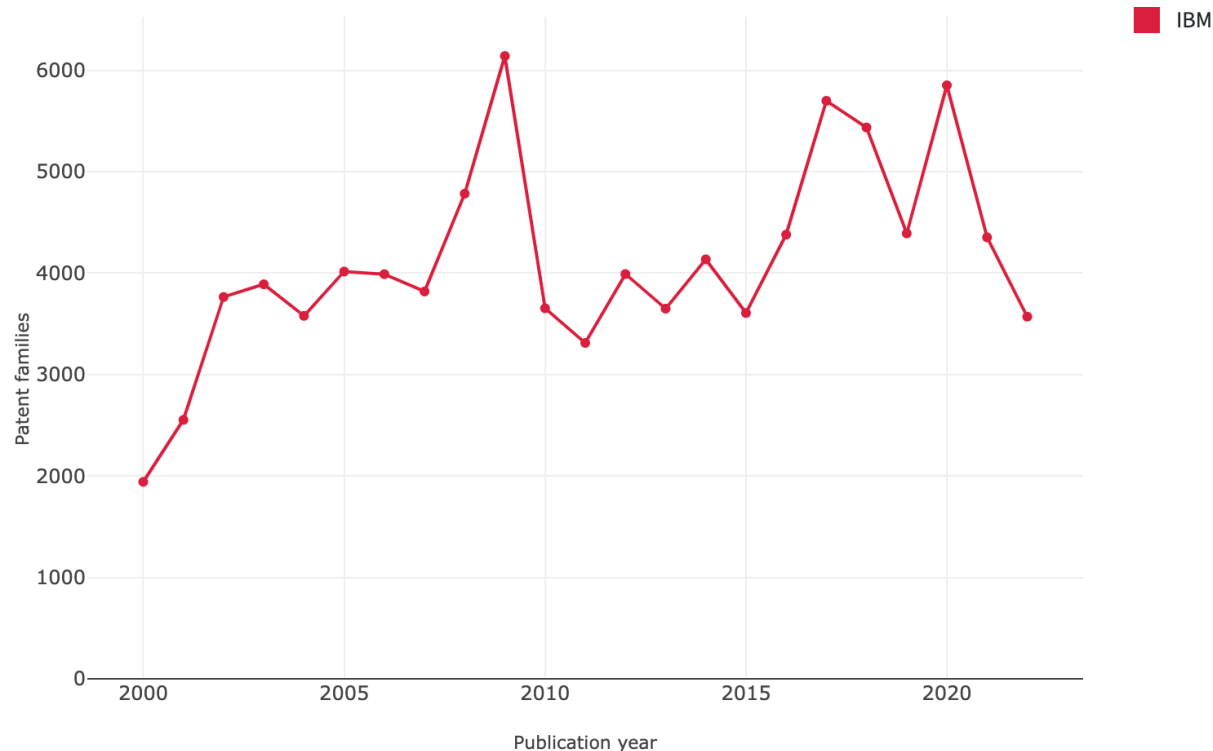
The journey to a well-rounded budget





Define business objectives

Define business objectives



The number of patent families published each year by publication year and organisation.

44%
Reduction
of patent
families

As of 2022, IBM no longer had the largest number of approved patents in the US, with their patent count reducing by 44%.

\$417m
+ Risk
Exposure

If IBM look to prune 20% of their portfolio this would lead to an increase in risk exposure of 125% for a 20% reduction in cost.

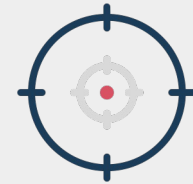
Align portfolio to future business plans



Increase presence in target market



Prioritise quality over quantity



Improve IP and Product alignment

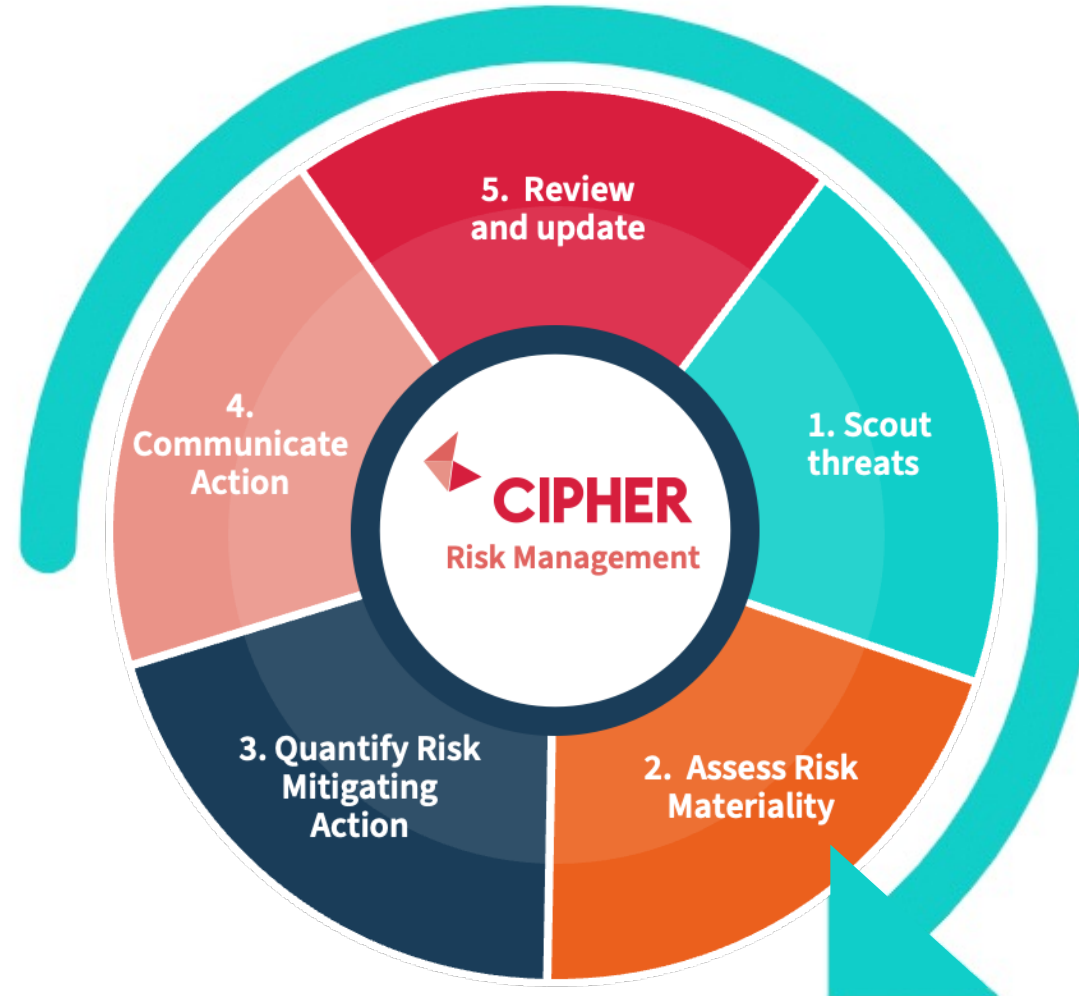
What will deliver growth for your business?





Model impact of portfolio changes to risk

Cipher risk management process



IBM risk exposure to universe

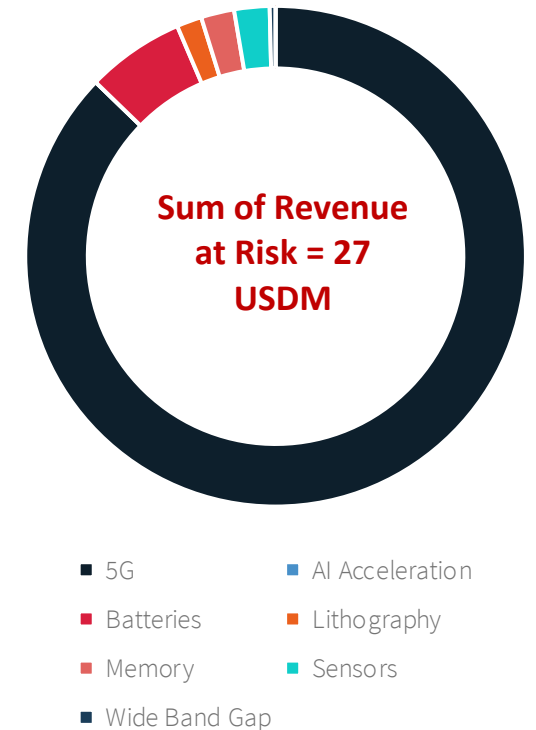
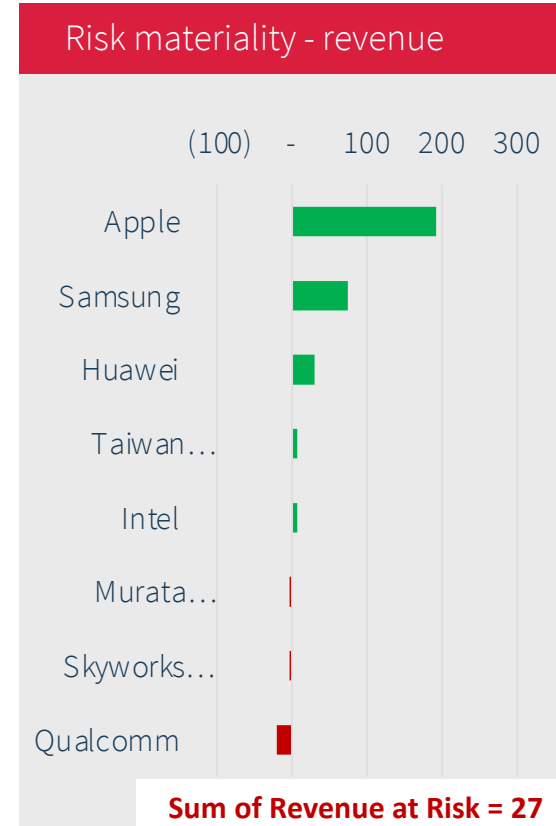
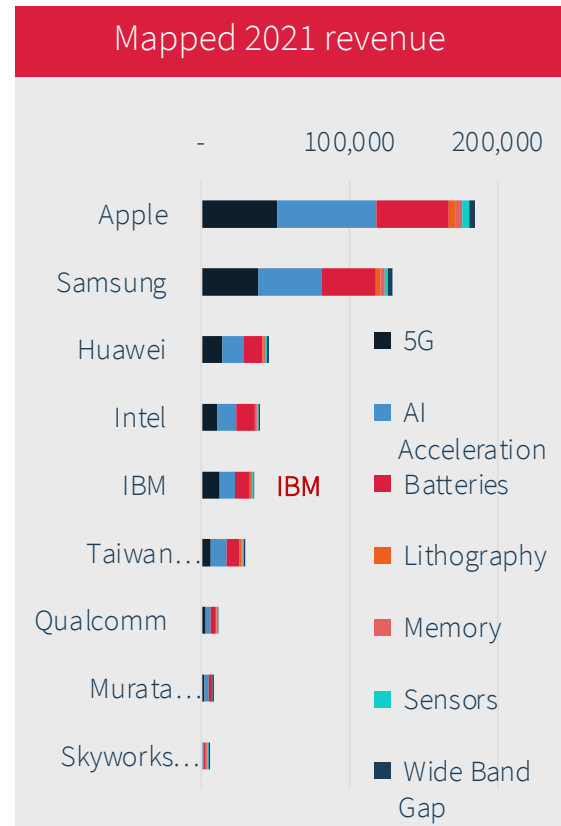
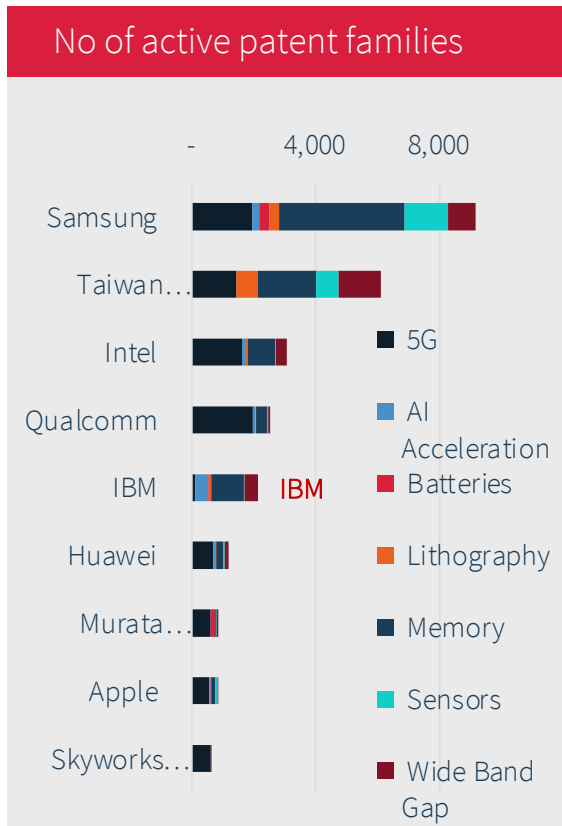
IBM Risk Exposure to Universe



Variables:

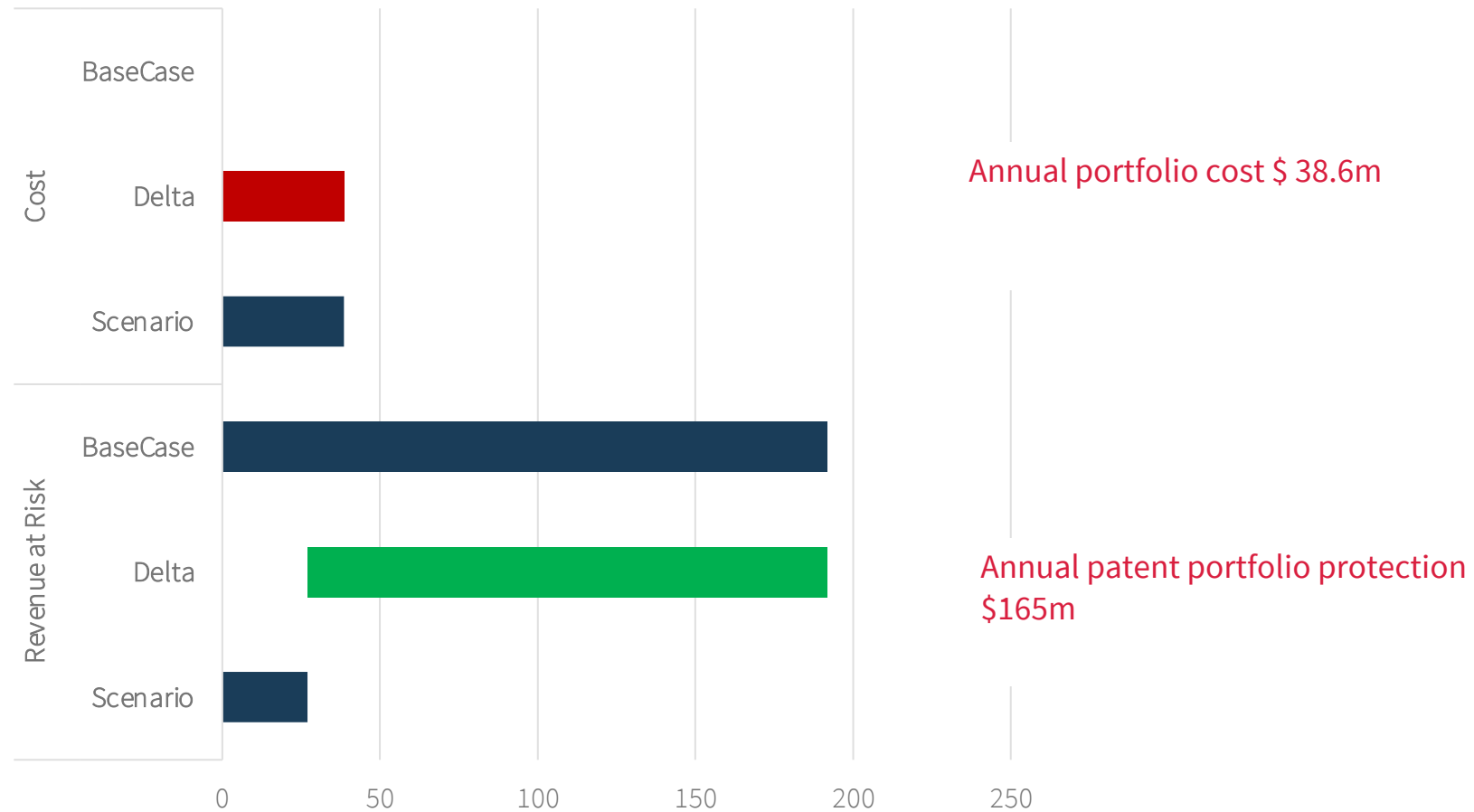
Company	IBM
Total Relevant Patents (Landscape)	500,000
IBM Relevant Patents	43,476
IBM Mapped Revenue US\$bn	60.530
Global Market Estimate US\$bn	250
Royalty Rate	4%

Risk model base case for semiconductors



What value is offered by the IBM portfolio?

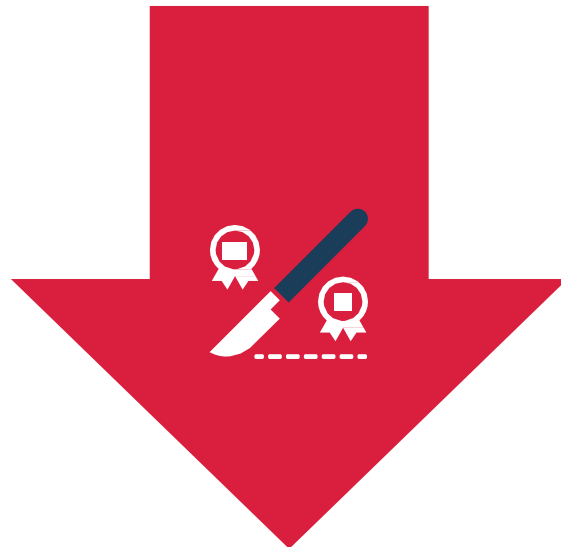
Scenario analysis: Annual patent portfolio cost vs annual revenue risk materiality, USDM



Model change

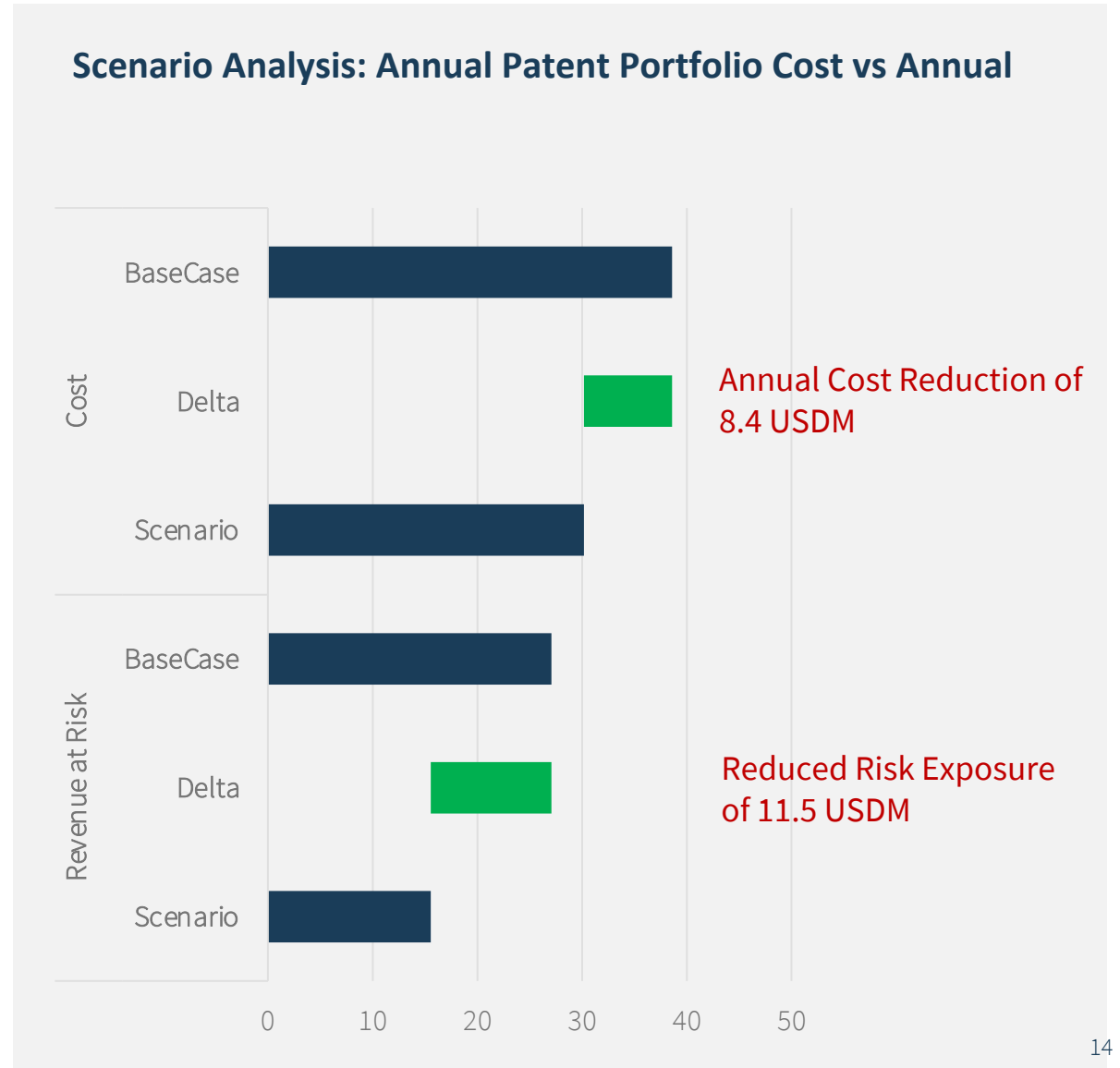
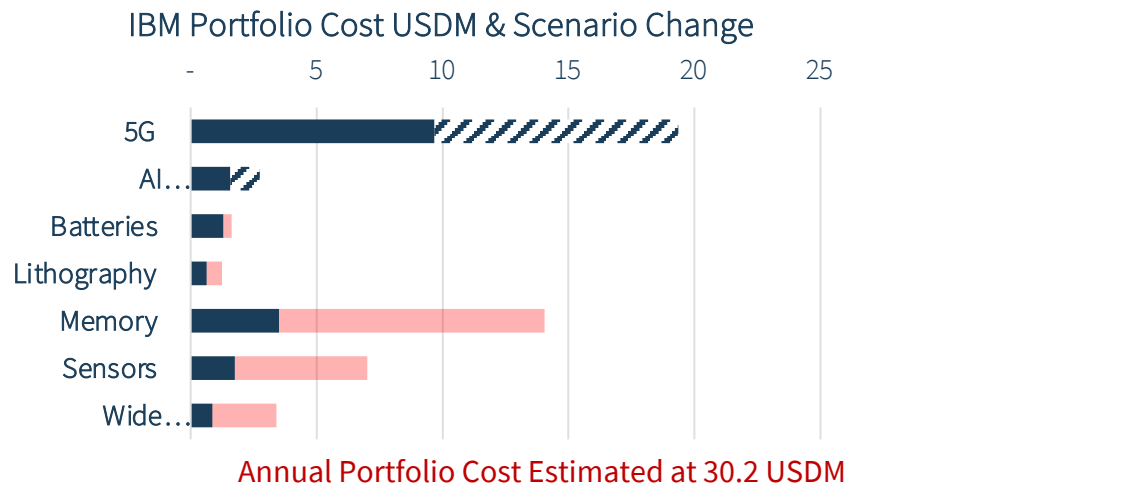
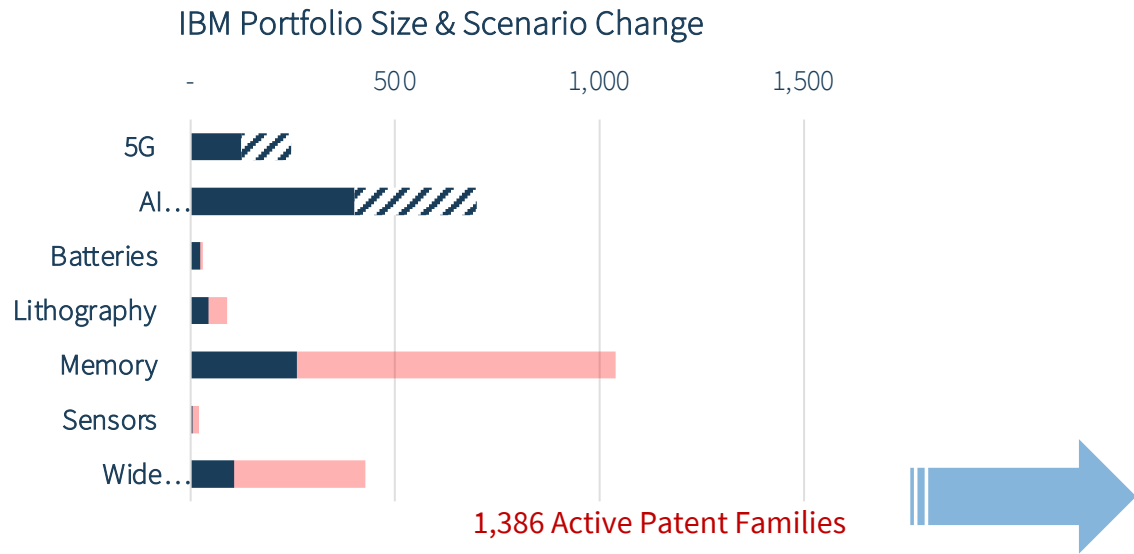


5G +100%
AI +75%

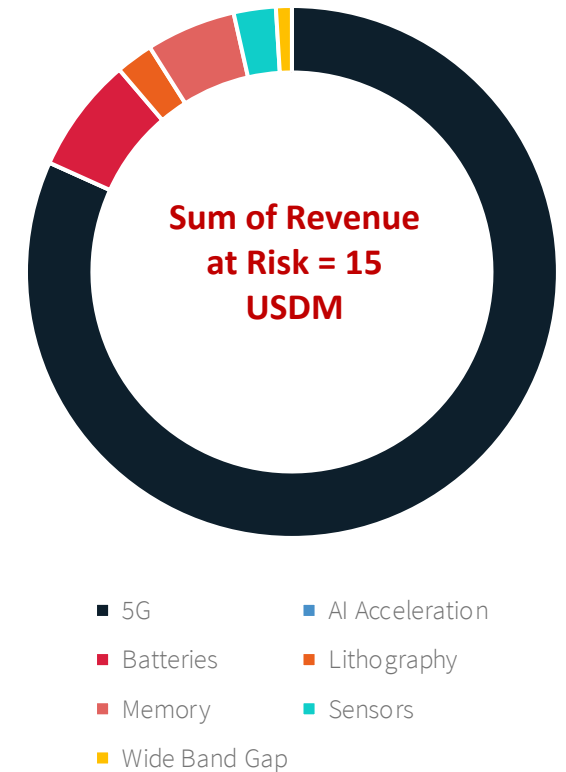
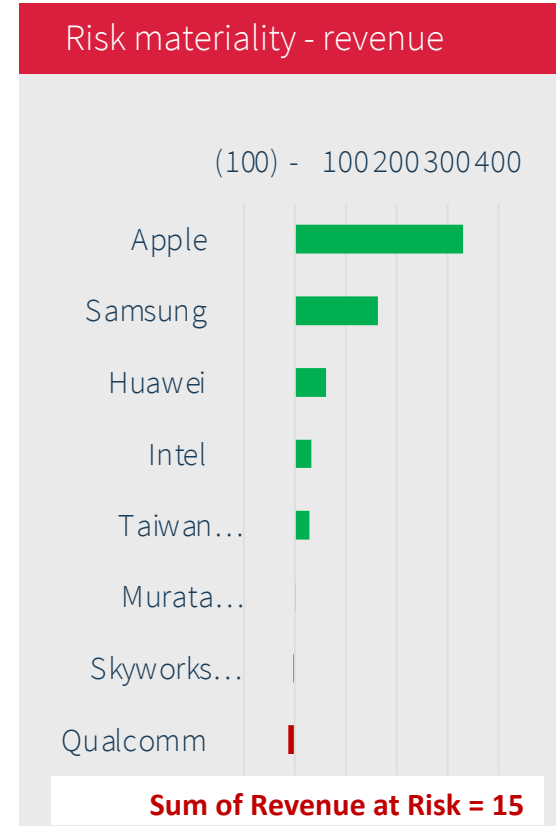
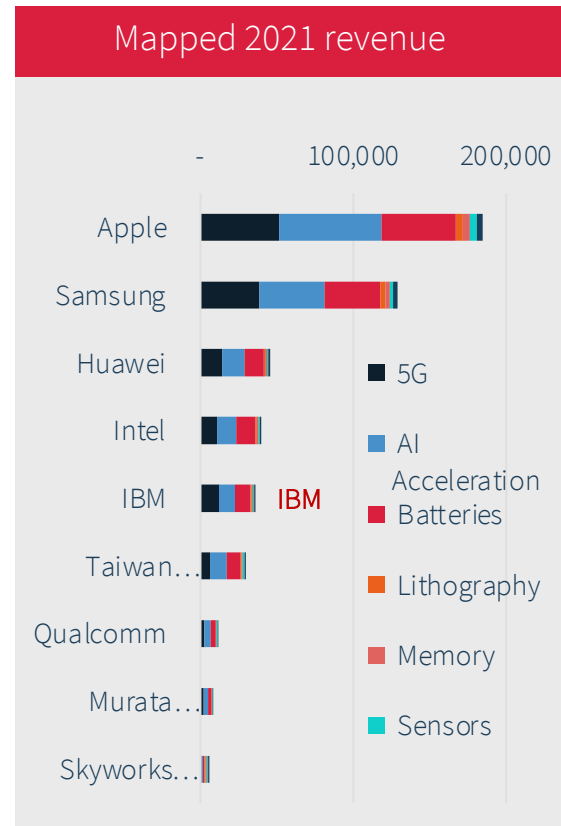
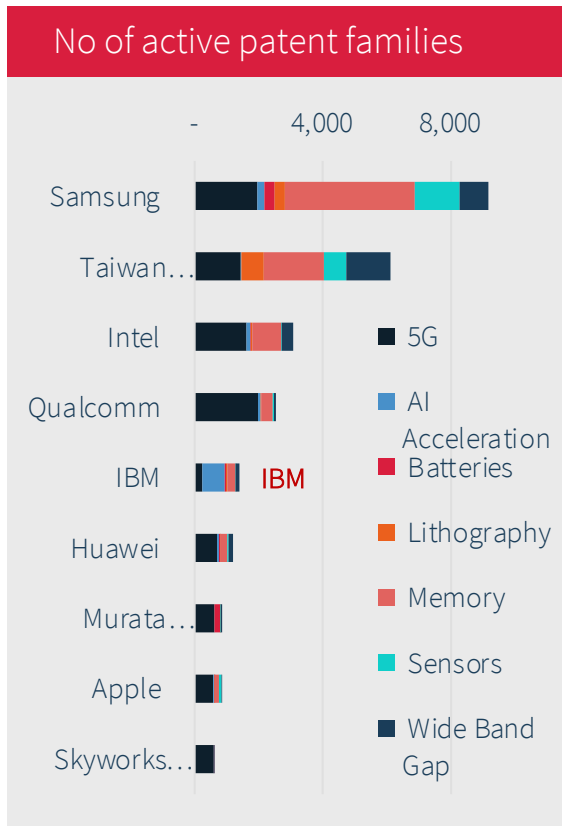


Batteries -20%
Lithography -50%
Memory -75%
Sensors -75%
Wide-band Gap -75%

Rebalancing – risk to opportunity



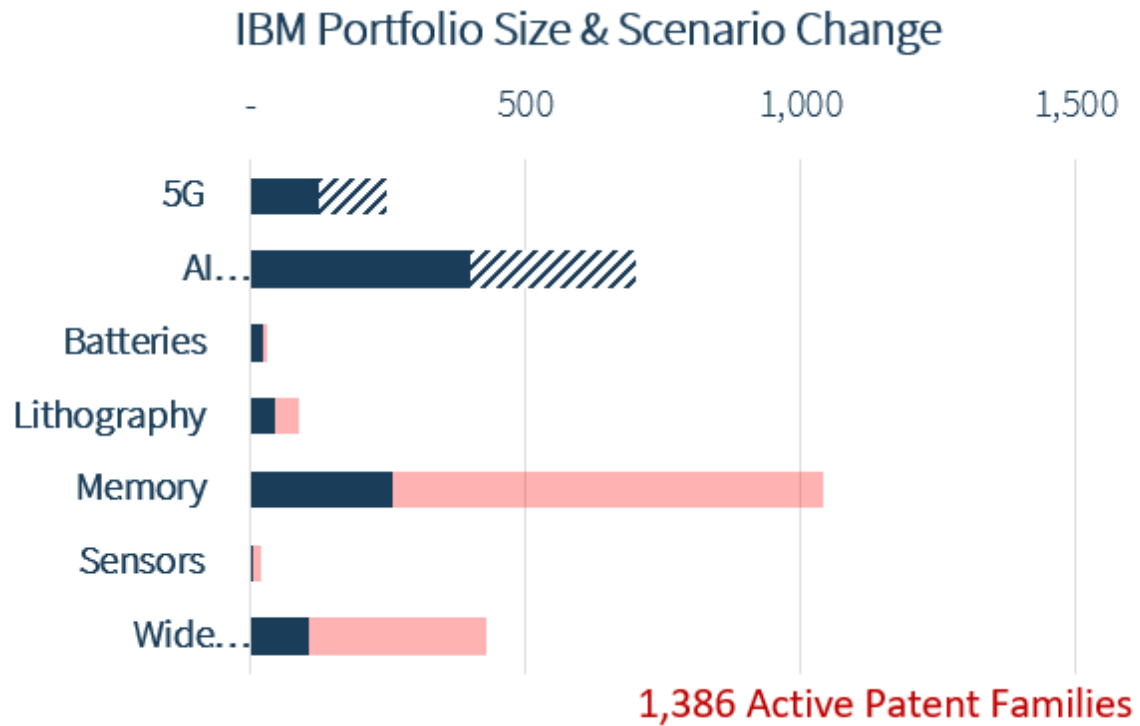
Modelling budget changes





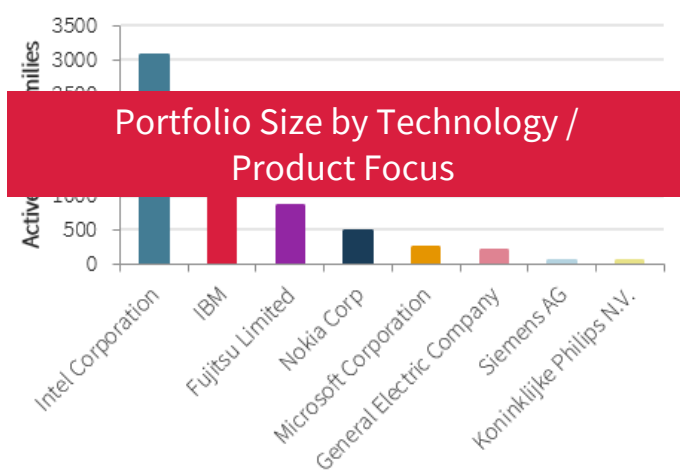
Prune surplus patents

Identify areas that are overstocked



Surfacing data across portfolio of interest

Portfolio size: Active families, by organisation

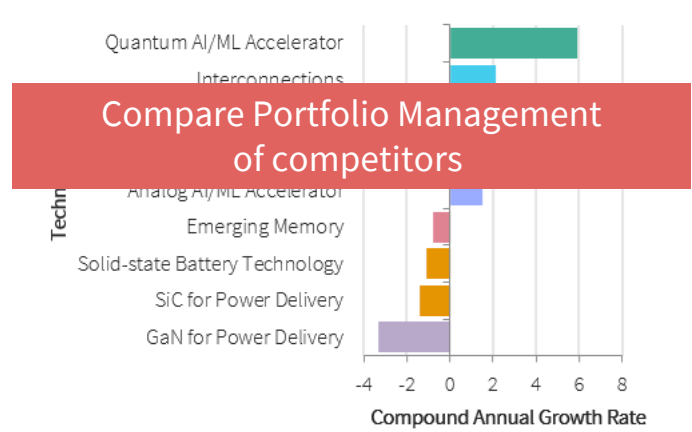


Portfolio Size by Technology / Product Focus

	United States	China	Japan	Germany	Korea, Republic of	Taiwan	United Kingdom	EPO	France	Netherlands	Next 78
Intel Corporation	2,014	446	140	273	334	406	199	196	149	161	374
IBM	1,774	117	111	69	16	32	133	18	7	2	44
Fujitsu Limited											16
Nokia Corp											202
General Electric Company	182	62	62	31	21	17	34	31	31	3	81
Microsoft Corporation	182	45	15	37	15	5	37	37	35	28	77
Koninklijke Philips N.V.	40	30	30	26	7	6	18	26	18	7	19
Siemens AG	14	8	1	25	6	0	8	13	9	1	30

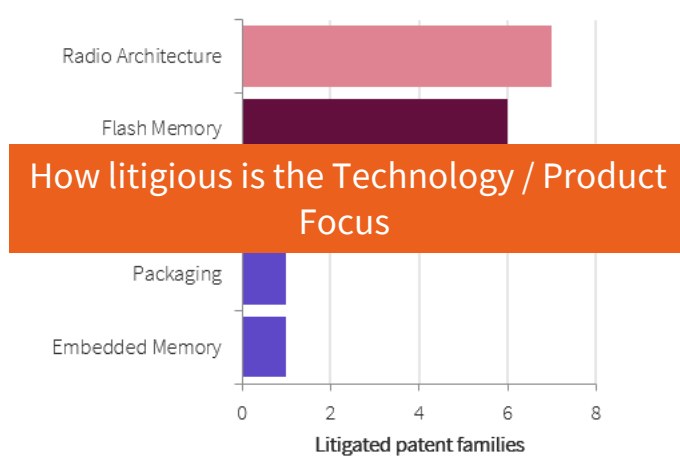
Geography Filing by Technology / Product Focus

Patenting activity: Active families CAGR, by technology



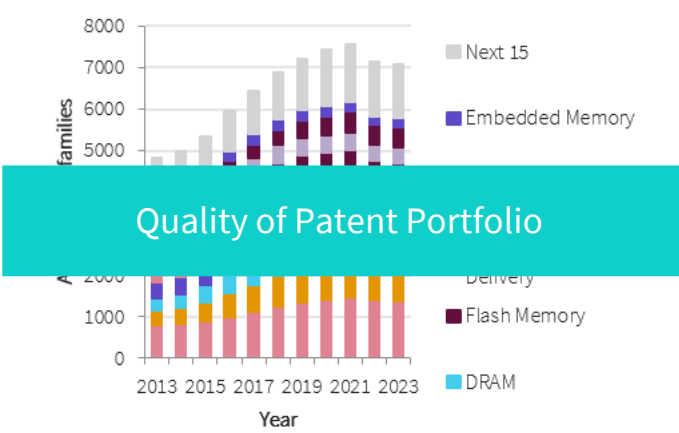
Compare Portfolio Management of competitors

Disputes: Litigated families, by technology



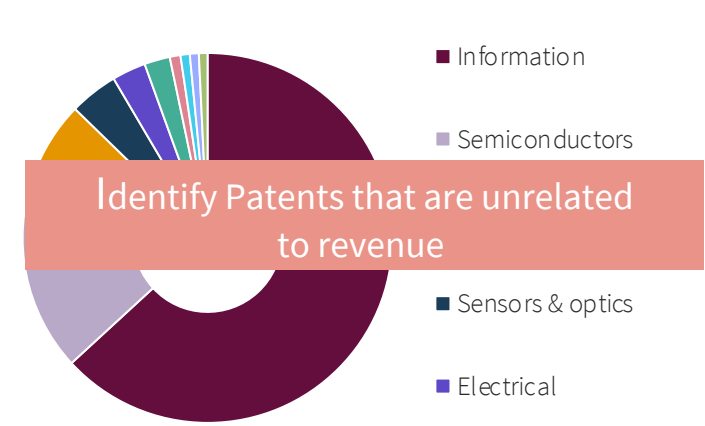
How litigious is the Technology / Product Focus

Portfolio trends: Active families, by technology and year



Quality of Patent Portfolio

Portfolio size: Active families, by technology



Identify Patents that are unrelated to revenue

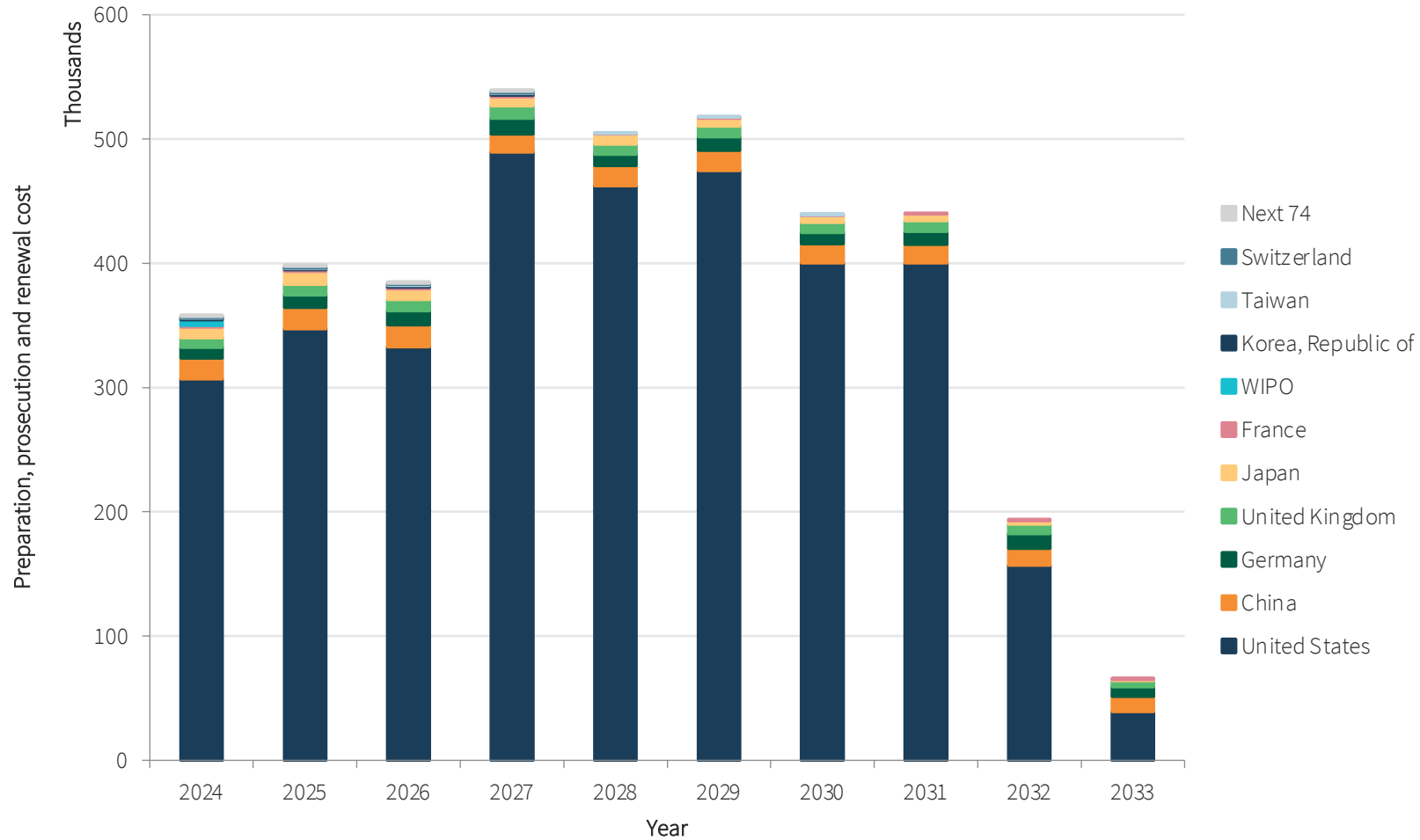
Low hanging fruit – Overstocked & low litigation risk

	Samsung	Taiwan Semiconductor	Intel	IBM	Qualcomm	Huawei Technologies	Apple	Murata Manufacturing	Skyworks Sol	TOTAL
DRAM	627	346	82	122	77	19	11	2	2	1,288
Embedded Memory	121	183	117	68	41	14	6	1	0	551
GaN for Power Delivery	130	152	142	18	13	43	0	20	4	522
Si for Power Delivery	108	196	13	14	6	27	1	6	9	380
Active Material	98	69	7	12	4	17	15	4	0	226
3D-DRAM	44	9	44	11	12	15	1	0	0	136
TOTAL	1,128	955	405	245	153	135	34	33	15	3,103

Currently active patent families (granted or pending) by organisation and technology.

Upcoming renewals

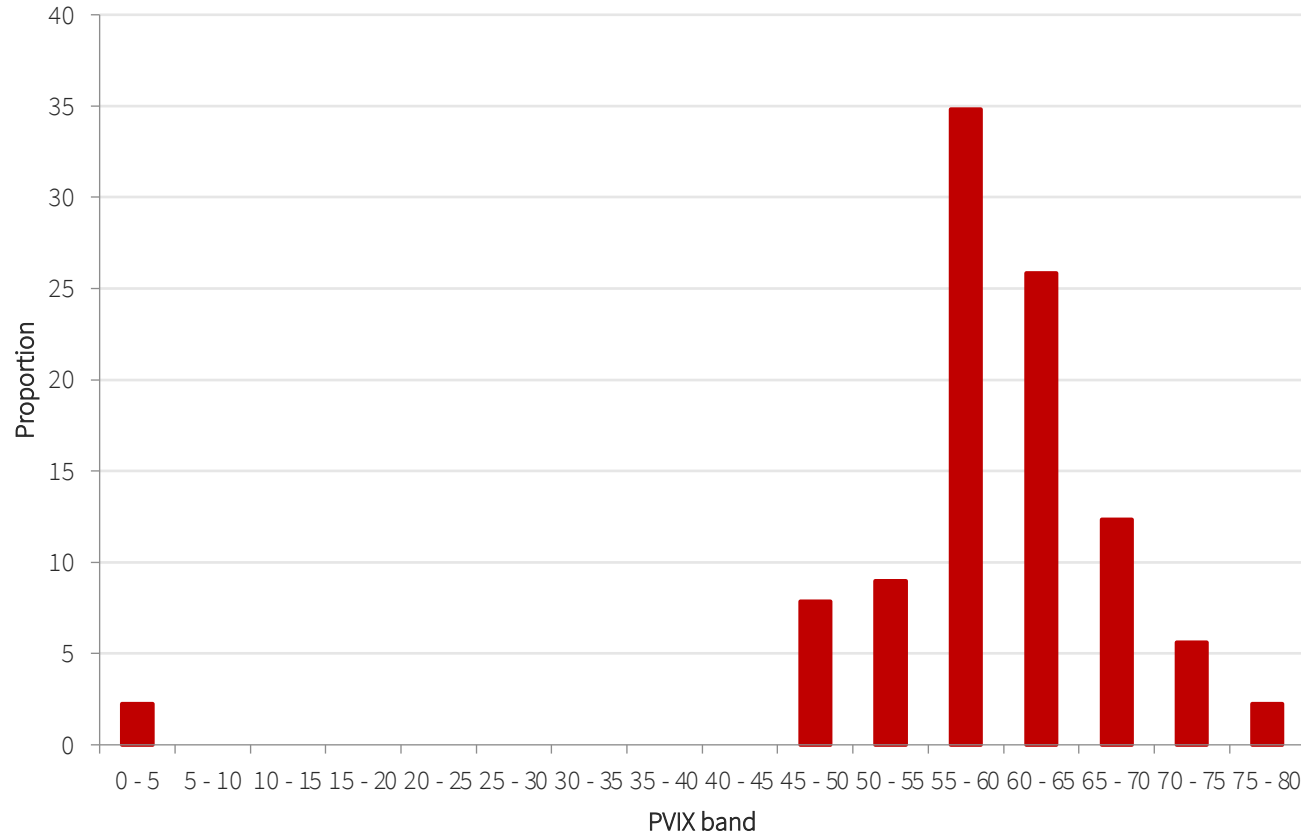
Cost: Future cost, by country



Filter IBM's portfolio by Renewal date and focus on patent families that have a renewal fee in the next budget cycle (2024)

Identify low-quality families

Portfolio Value Index (PVIX): PVIX distribution, by organisation



The PVIX quality score considers the following;

Reputation = Forward citations normalised against self cites

Market = Number of country applications ranked by GDP

Age = Citation analysis is normalised against age

Identify current and future savings



Device providing high domain wall velocities

The invention is directed to a ferromagnetic device (10), having an elongated structure extending along a longitudinal direction (11), comprising a ferromagnetic material, wherein a transverse cross section (20) of the ferromagnetic material, perpendicular to said longitudinal direction, is designed to provide a domain wall velocity above the Walker breakdown limit of the ferromagnetic material. In particular, at least a portion (-) of a peripheral contour of the ferromagnetic material forms, in the transverse cross-section (20), a non-orthogonal convex set. For example, the whole peripheral contour may realize a (non-orthogonal) convex polygon. The invention is directed to a method of manufacturing a ferromagnetic device (10), having an elongated structure extending along a longitudinal direction (11), comprising a ferromagnetic material, wherein a transverse cross section (20) of the ferromagnetic material, perpendicular to said longitudinal direction, is designed to provide a domain wall velocity above the Walker breakdown limit of the ferromagnetic material. In particular, at least a portion (-) of a peripheral contour of the ferromagnetic material forms, in the transverse cross-section (20), a non-orthogonal convex set. For example, the whole peripheral contour may realize a (non-orthogonal) convex polygon.

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US9276196B2

Images (6)

Description [\[show\]](#)

Claims

1. A ferromagnetic device (10) for spin-based information storage or processing apparatus, having an elongated structure extending along a longitudinal direction (11), comprising a ferromagnetic material, wherein a transverse cross section (20) of the ferromagnetic material, perpendicular to said longitudinal direction, is designed to provide domain wall velocities substantially larger than a domain wall velocity as obtained at the Walker breakdown limit of the ferromagnetic material.
2. The ferromagnetic device of claim 1, wherein the transverse cross section is designed to substantially prevent vortex or antivortex nucleation off edges (21, 22) of the transverse cross section.
3. The ferromagnetic device of claim 1, wherein a thickness of the ferromagnetic material is reduced at the level of one or more lateral edges (21, 22) of the transverse cross-section (20), preferably along a width of 10-30 nm.

Country	DE	CN	GB	US	Total
2024	\$876	\$776	\$617	\$11,754	\$14,023
2025	\$1,040	\$1,086	\$672	0	\$2,798
2026	\$1,216	\$1,086	\$727	0	\$3,029
2027	\$1,393	\$1,086	\$810	0	\$3,289
2028	\$1,592	\$1,396	\$892	\$7,847	\$11,727
2029	\$1,804	\$1,396	\$961	0	\$4,161
2030	\$2,015	\$1,396	\$1,030	0	\$4,441
2031	\$2,215	\$1,396	\$1,098	0	\$4,709
2032	\$2,427	0	\$1,153	0	\$3,508

Lifetime Saving if Family Pruned = \$51,658



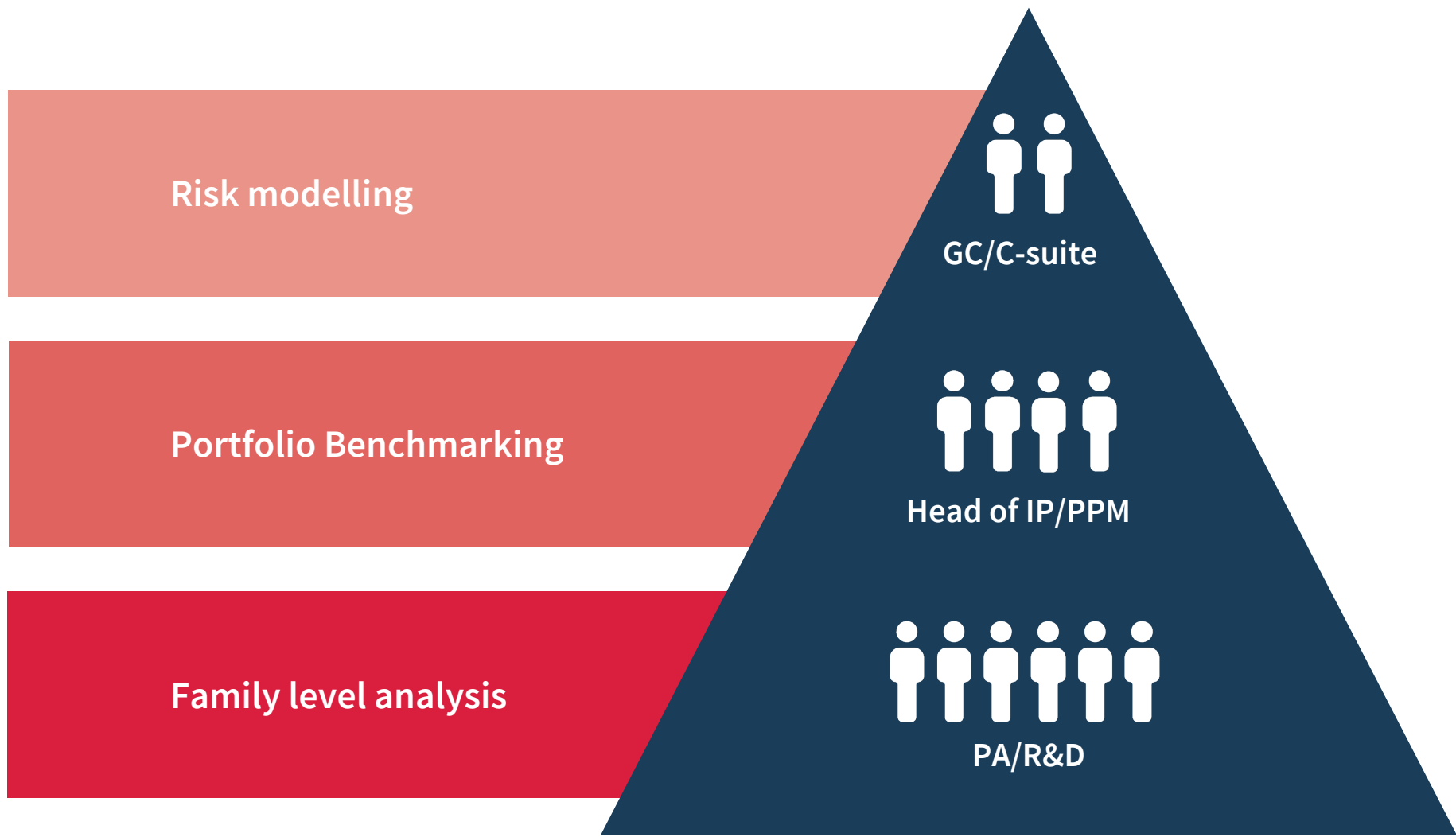
Communicate plan



You need to be able to tell a story to your executives, one that's convincing and supported by data.

Jared Engstrom, CrowdStrike

Right data at the right level, at the right time



Storytelling with data



Base Revenue protected



Revenue at risk



Yearly Cost Saving



Return on investment of patents



Rebalanced Protection



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