PurposiveStep

A presentation for the FICPI Forum

04 November 2020

Intellectual Property Valuation:

Practicalities for IP Attorneys

Client: I need a patent/IP valuation …

IP Attorney:

What's a patent worth? (back to basics)

- Why patent? Keep competitors out of our market/off our product* or similar/competing products: market exclusivity
- How? By getting enforceable, granted patent claims
- What? On as broad a scope as commensurate with the above
- When? Usually very early on in product development – but need to cover as many (future) sales periods as possible
- Where? In all our current/prospective markets, if possible

So a patent is worth a figure that represents the extent to which it can achieve all that – but the figure must be adjusted down to the extent that it can*not* achieve all that

A method for arriving at a patent* valuation

- There are other methods! This is suitable for IP attorneys
- Emphasises what the IP attorney needs to input/understand
- In arithmetical terms, we can look at the process in 4 steps:

I. What's the patent worth if it's 'doing its job' for 20+ years?
II. Deduct for the contribution made by *non*-patent factors
III. Deduct for the risk that the patent *can't* 'do its job for life'
IV. Adjust the figures to arrive at a value in 'today's money'

* This method can be adjusted to apply to other forms of IP, rather than patents, and to services, rather than products

I. Assume that our patent *will* 'do its job'

- The value of our patent could then be seen as:

- What we might gain by selling products covered by the patent
- Minus what we might gain anyway, if we had no such patent

- First, identify all the products that include a claimed feature
- Obtain (finance/commercial people) the nett* value of those product(s) sales during the life of the patent (EPL)

*The accountants will take account of the costs of developing/producing the product, marketing, overheads, people, amortisation, etc.

II. Deduct contribution by non-patent factors

- BUT not all sales will be due just to the patent – need to deduct or apply a % due to other (non-patent) factors

- A. The product as a whole may be a success due to components or design aspects *not* covered by the patent claims
  - Clarify to marketing/commercial which these are and then
  - Ask: how much 'value' do these non-patented components add?

- If, say, 10%, then our patent cannot be worth more than 90% of the nett sales value arrived at from step I

Patent exclusivity does not account for all sales

- B. Market exclusivity due to patented elements will not be the *only* reason why people buy our product:
  - design, advertising, marketing, problems with competitor products, &c
- Ask commercial people for an estimate of contribution made by factors (associated with but) not directly due to the product or the patent
- If, say, 20%, then the patent value is further reduced (from 90%) to 72% nett sales

IIC. Other adjustments to 'nett sales'

- Is the patent licensed in some territories? – add royalties
- Could the patent be extended? – add adjusted nett sales

- Is the patent co-owned/other 'sharing'? – subtractions due
- It costs to obtain and maintain the patent – subtract costs

- Because all the foregoing adjustments are time-consuming, sometimes an overall factor is applied to nett sales, e.g. based on typical profit-splitting or a standard royalty rate

In the EPO example (slides 10/11), the non-patent factors are estimated to account for about two-thirds of sales, so the initial value of the patent is reduced to ⅓ of the nett sales value

III. Deduct for risk the patent can't do its job

- So far, we have *assumed exclusivity* for the claimed aspects

- A. But is the patent valid?

- Are there grounds for invalidity? Chances of success?
- What is the likelihood that someone may actually challenge?

- Do we have grounds for defence? Chances of success?
- Do we have the resources to – would we, in practice – defend?

Testing the 'exclusivity' assumption

- B. Even assuming it's valid, is the patent inherently enforceable?
- Do the claims specify a workable 'infringement test'?
- Are there 'no-brainer' claims?

- Other issues include: incomplete ownership chain, etc.

- We now need to reduce the total from step II to account for factors that may limit our exclusivity in the marketplace ('legal risk')

For time reasons, this presentation assumes you know how to assess the legal (IP) risks – further suggestions are in the FICPI Journal article or do contact me

Example valuation published by EPO

Example Business Plan (highlighted entries input)							
Year		1	2	3	4	5	6
Turnover		**232,000**	**415,000**	**546,000**	**573,000**	**541,000**	**487,000**
Selling Price (unit)		351	369	387	407	427	448
Production Cost (unit)		183	183	183	183	183	183
Gross margin (unit)		168	186	204	224	244	265
Gross margin (unit) as %		48%	50%	53%	55%	57%	59%
Royalty (on gross margin)	at 33%	16%	17%	17%	18%	19%	20%
Saved royalties		36,644	69,032	94,979	104,069	102,017	95,063
Legal risk remaining	assume 78%	78%	78%	78%	78%	78%	78%
Expected royalty		28,582	53,845	74,083	81,174	79,573	74,149

- Gross margin = selling price minus cost of product
- Nett sales = turnover (€) x gross margin (%) [step I]
- Non-patent factors accounted for by subtracting ⅔ (= 33% 'royalty' rate) [step II]
- Legal risk est'd. as 22% =chance of patent failing [step III]
- 'Expected royalty' = value added by patent, through 6-year EPL

Example

Explanation of terms

IV. Adjust to get value in today's money

- The EPO example – the spreadsheet – applies a further step
  - This may appear under the 'Turnover' or 'Nett sales' lines, instead
- Puts monetary value of future income streams (e.g. annual nett sales) into today's prices – the Net Present Value (NPV)

- We can (or accountants will) calculate the NPV
  - Usually use a method called Discounted Cash Flow (DCF)
  - Discounts the value of future cash flows to account for inflation, etc.

- NPV/DCF is what most commercial organisations use to compare values when deciding on resource allocation

NPV/DCF – useful accounting background

- The discount factor applied to future sales/royalties/cashflow assumes that the value of a unit of currency in the future is worth less than the value of the same unit today
- Companies typically use the weight-averaged cost of capital (WACC) for the discount rate/factor
- WACC measures the cost of capital to a firm, which is a reasonable price tag to put on investment in a product
  - it takes into consideration the rate of return expected by shareholders

Final steps – DCF and final valuation (NPV)

Example Business Plan (highlighted entries input)									
Year				**1**	**2**	**3**	**4**	**5**	**6**
Turnover				**232,000**	**415,000**	**546,000**	**573,000**	**541,000**	**487,000**
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Legal risk remaining			assume 78%	78%	78%	78%	78%	78%	78%
Expected royalty				28,582	53,845	74,083	81,174	79,573	74,149
Discount factor			at WACC = 8%	100%	92%	85%	78%	72%	66%
Discounted royalty				28,582	49,537	62,704	63,209	57,006	48,870
Total before tax				**309909**					

Summary

- Don't panic! Teamwork with commercial & financial
  - IP Attorney input is essential (our role is) to:

- Identify client activities (e.g. products) protected by the IP
- Clarify which elements of the activity are covered (or not)
- Inform re: other relevant factors, e.g:
  - territories/sales areas encompassed
  - transactional deductions/additions (licences, other monetary deals)
  - costs of obtaining and maintaining the IP (may be included elsewhere)
- Assess the risk of exclusivity failing over time/place/activity
- Assess the risk of not being able to prove infringement

Thank you!

PurposiveStep

Supporting your IP-related career or business

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Julie Barrett – who am I?

- Mother, friend, singer, colleague, walker, mentor, writer, …

- Chartered & European Patent Attorney (CPA, EPA)
- Purposive Step Consultancy
  - Support for IP-related businesses and careers

- Non-linear career as IP Attorney
  - BSc(Comb Hons) Business Admin & Chemistry
  - Director of IP on Development Lead Team of multinational pharma co.
  - Own practice founder, partner in private practice, career/business coach
  - Focus on business/commercial use of IP

Omitted introductory slides x3

- The following three slides aim to draw parallels between house/tangible property valuation and IP/intangible property valuation.
- Introductory slides, cut due to cut in session time

Some basic considerations re: 'value'

Suppose, instead of IP, you need to value an old house … What's it worth?

Reason for valuation	Estimated value
You want to sell the house	What someone will pay – £400k?
You want to build the house	What it costs to build – £200k?
You want to insure the house	What it *did* cost to build – £10k? What it would cost to *re*build – £160k?
You want to let the house	Rental income – £1200 pcm?

Factors contributing to ‘value’ of property

- Depends on why you need to know value:
  - for a sale, depends on what someone else would pay for it
- Depends also on external factors, e.g.,
  - environment, neighbours, schools, crime, history, celebrity, security, &c
  - whether it is sold with sitting tenant (income stream v nuisance factor)
- You won’t receive the full price paid – need to deduct costs
  - Legal fees, agency fees, advertising/marketing, etc.

- Similar considerations and variables apply to valuing IP – and more!

Property – tangible and intangible

- You may want your house valued because you need to know your total asset value –
- you are likely to base that valuation on how much you could sell your house for, so …

- Let's assume you want to know the value of IP, e.g. a patent, because you want to know the asset value of the business –
- how much could you sell the patent for?

IP Valuation – Practicalities

Any questions?

Do get in touch if any questions remain unanswered

IP Valuation

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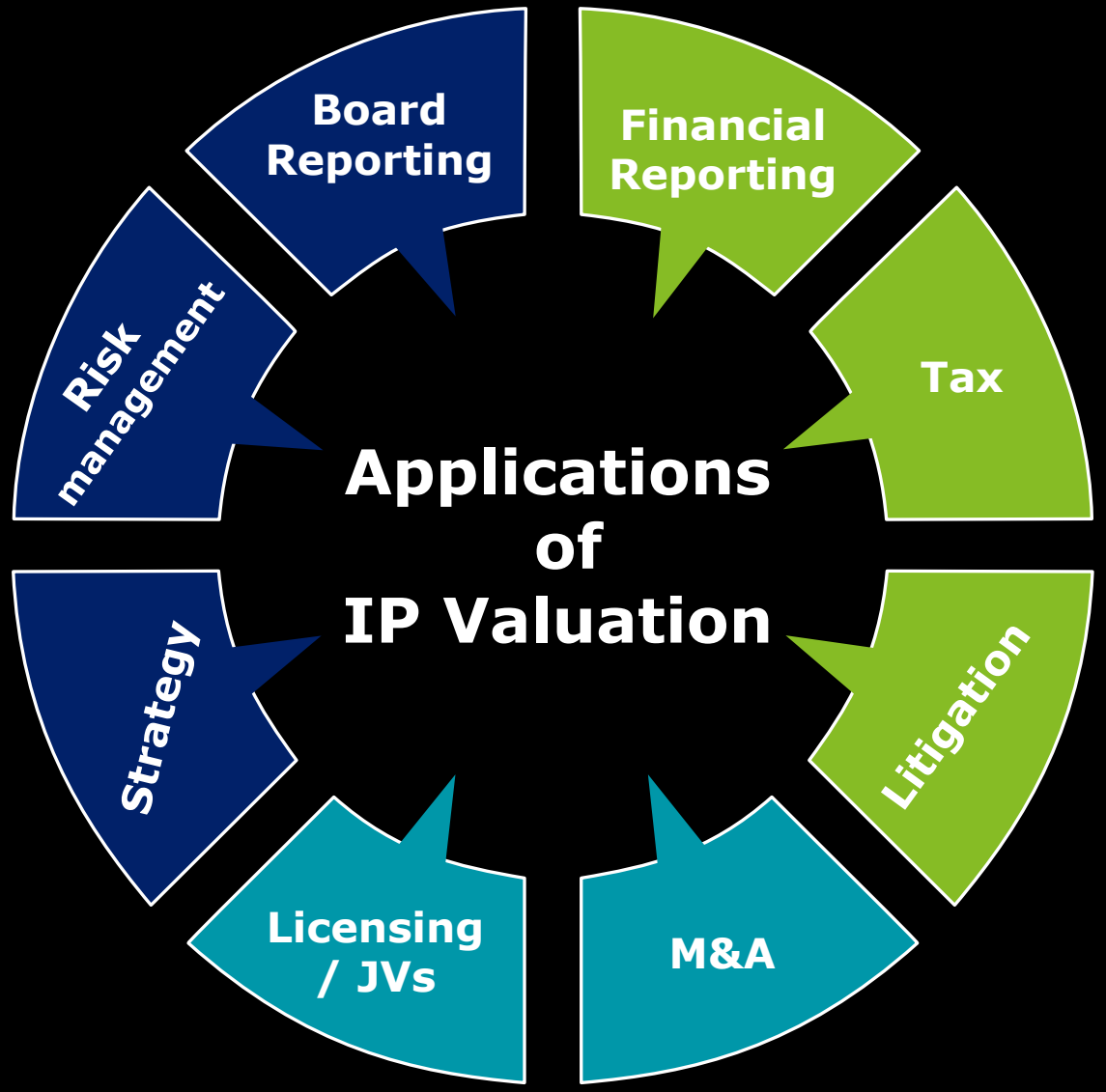
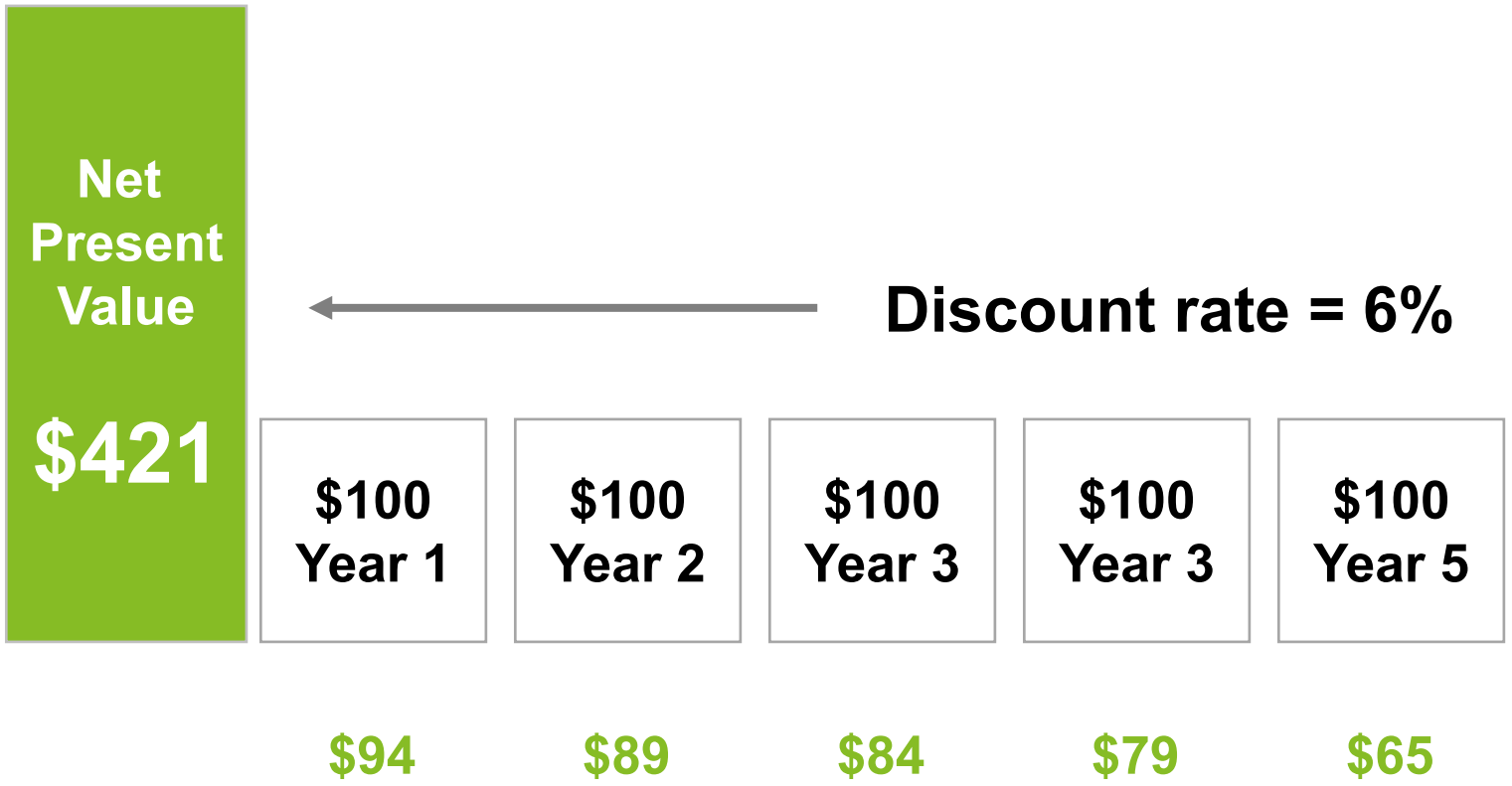

Board Reporting
Financial Reporting
Tax
Litigation
M&A
Licensing / JVs
Strategy
Risk management
Applications of IP Valuation

Background jargon & concepts

Present value of an annuity



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Present value of a project

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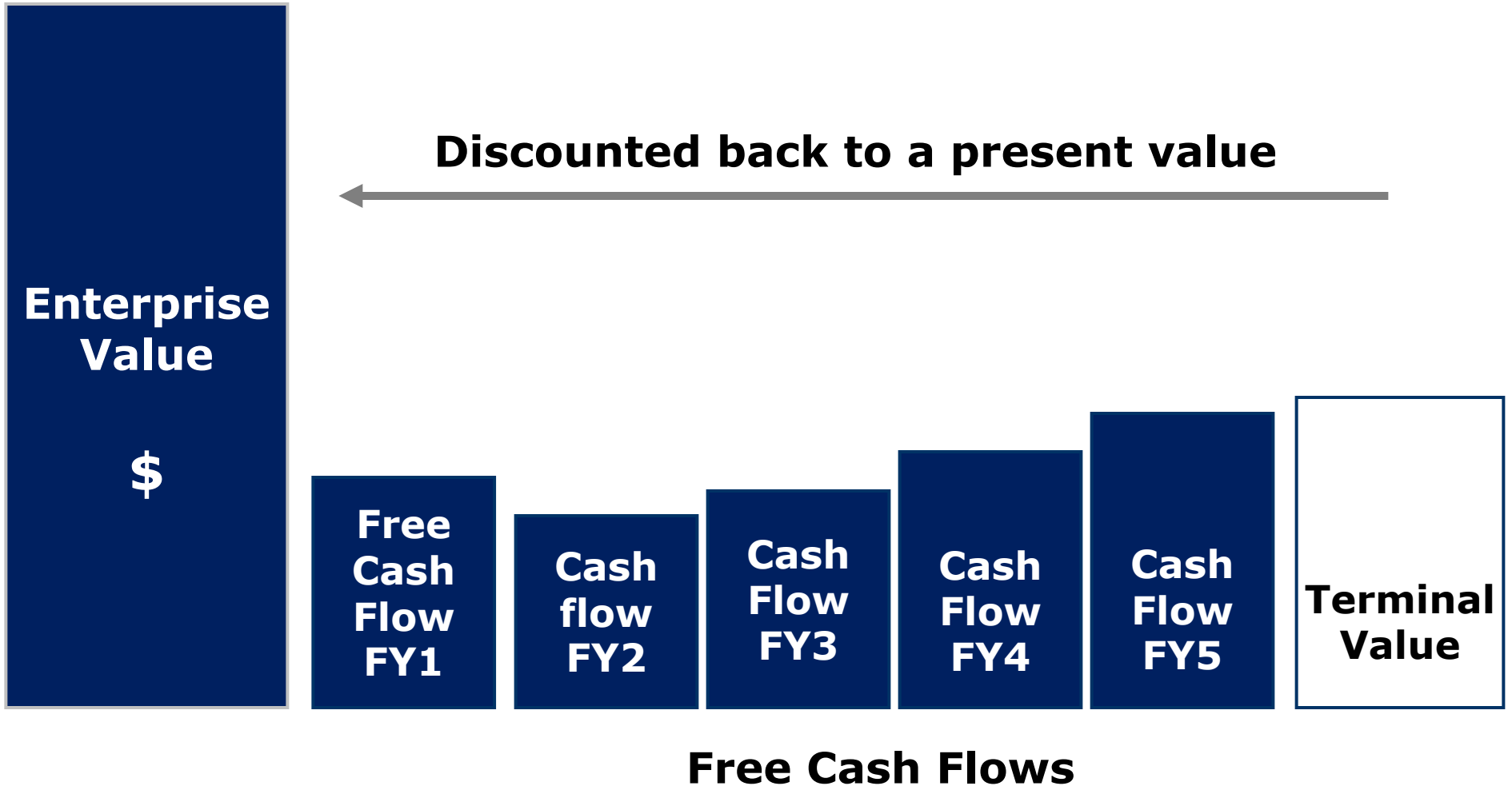
Enterprise valuation



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Valuation approaches & methods

Valuation approaches & methods

Cost Approach

- Replacement cost method
  - direct cost
  - opportunity cost
  - obsolescence provision

Market Approach

- Use restricted by:
  - data scarcity
  - comparability complications

Income Approach

- Income-based valuation methods
  - relief from royalty
  - profit split
  - incremental earnings
  - residual methods

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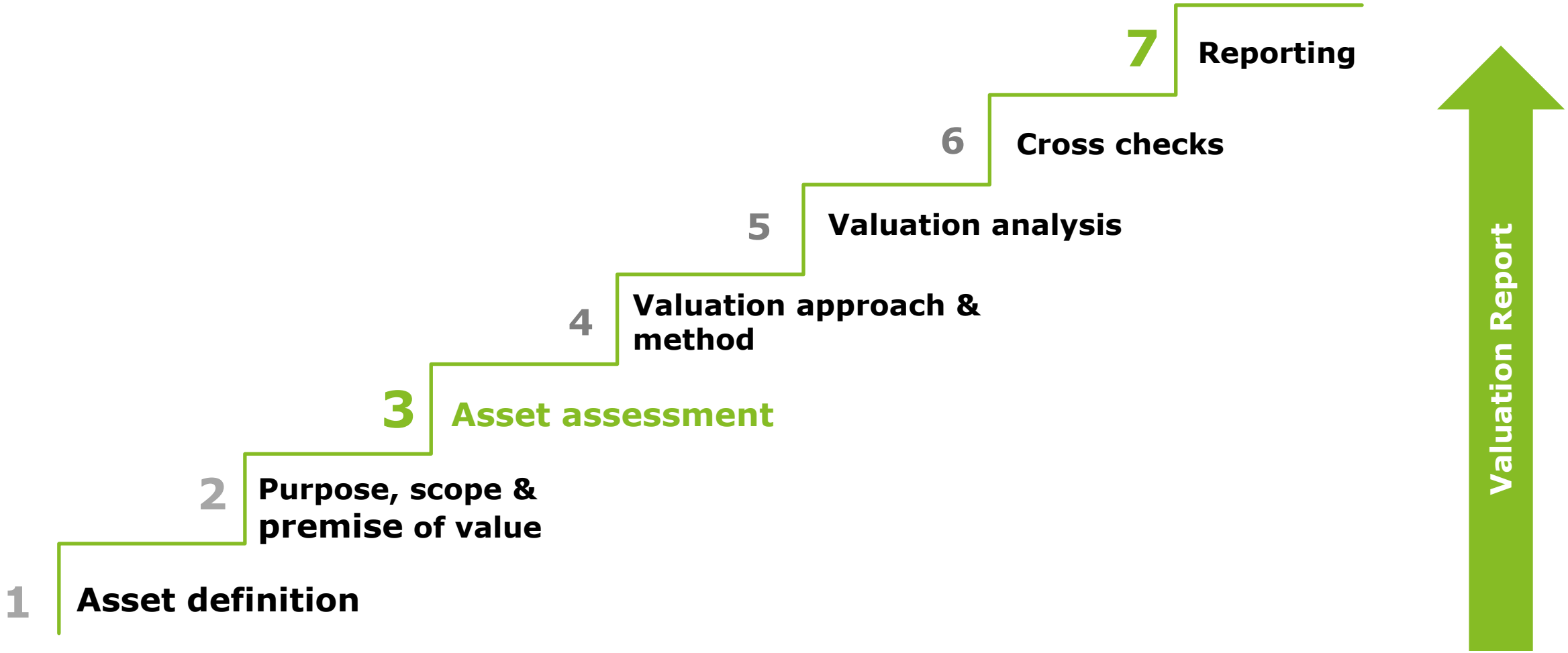
Steps in an IP valuation



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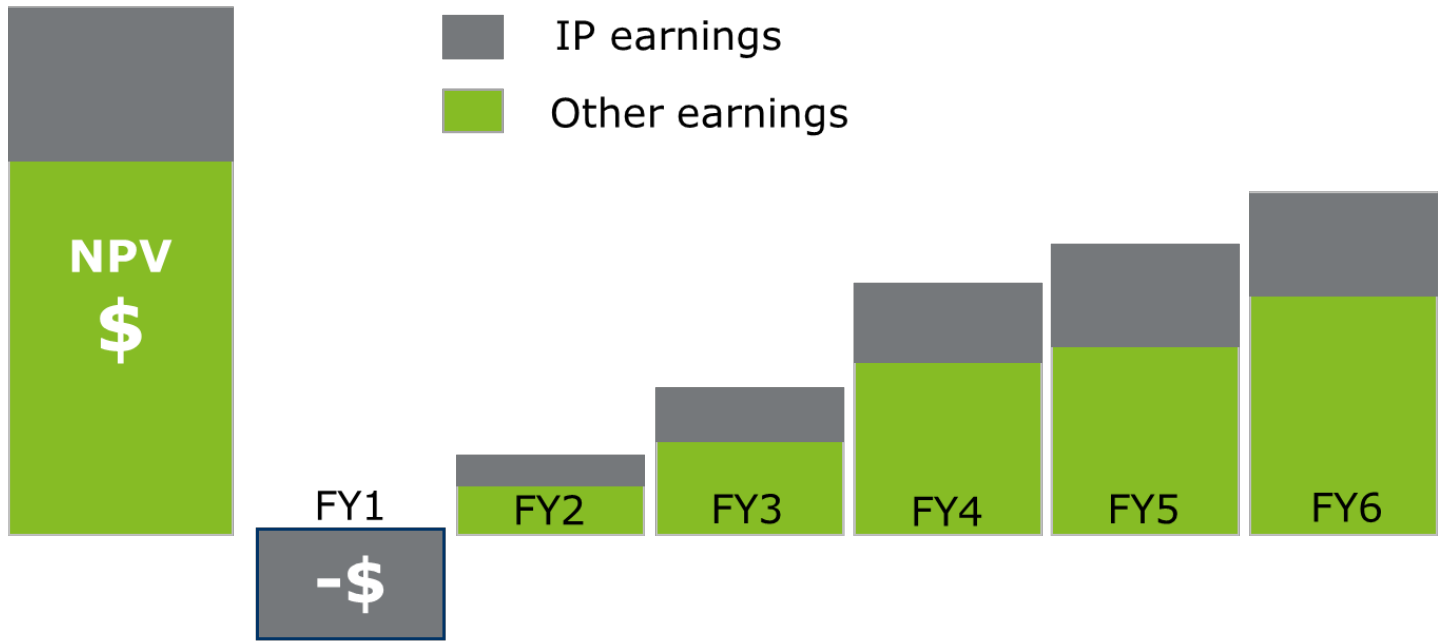
Income based IP valuation

1. Combined Earnings
2. IP Earnings
3. Associated Costs
4. Risk

5. Useful Economic Life



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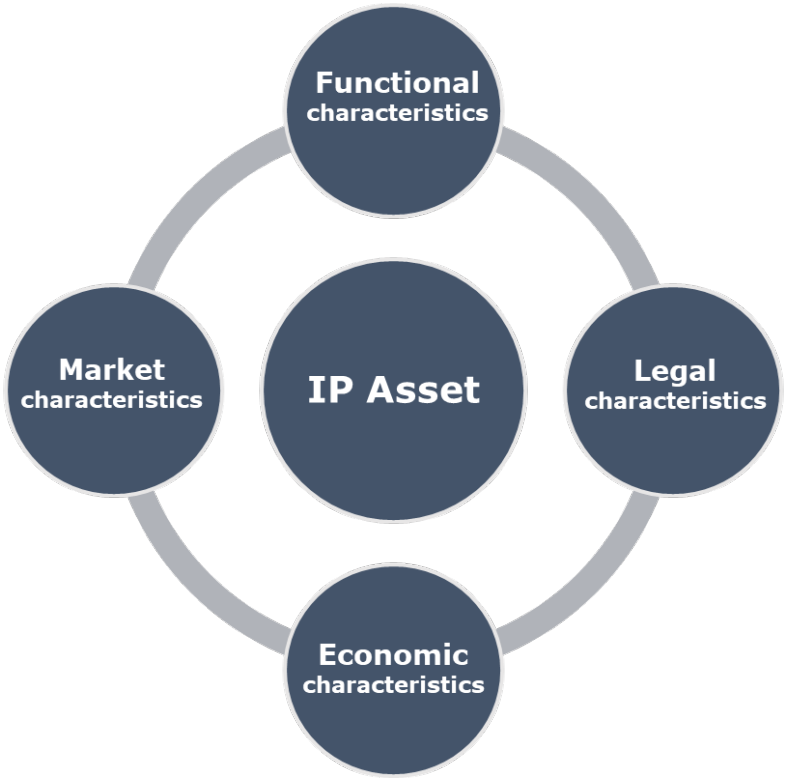
Income approach: illustration

Combined earnings of IP and contributory assets

1. Combined Earnings
2. IP Earnings
3. Associated Costs
4. Risk

5. Useful Economic Life

- Market size
- Market share
- Benchmarks
- Sales curve



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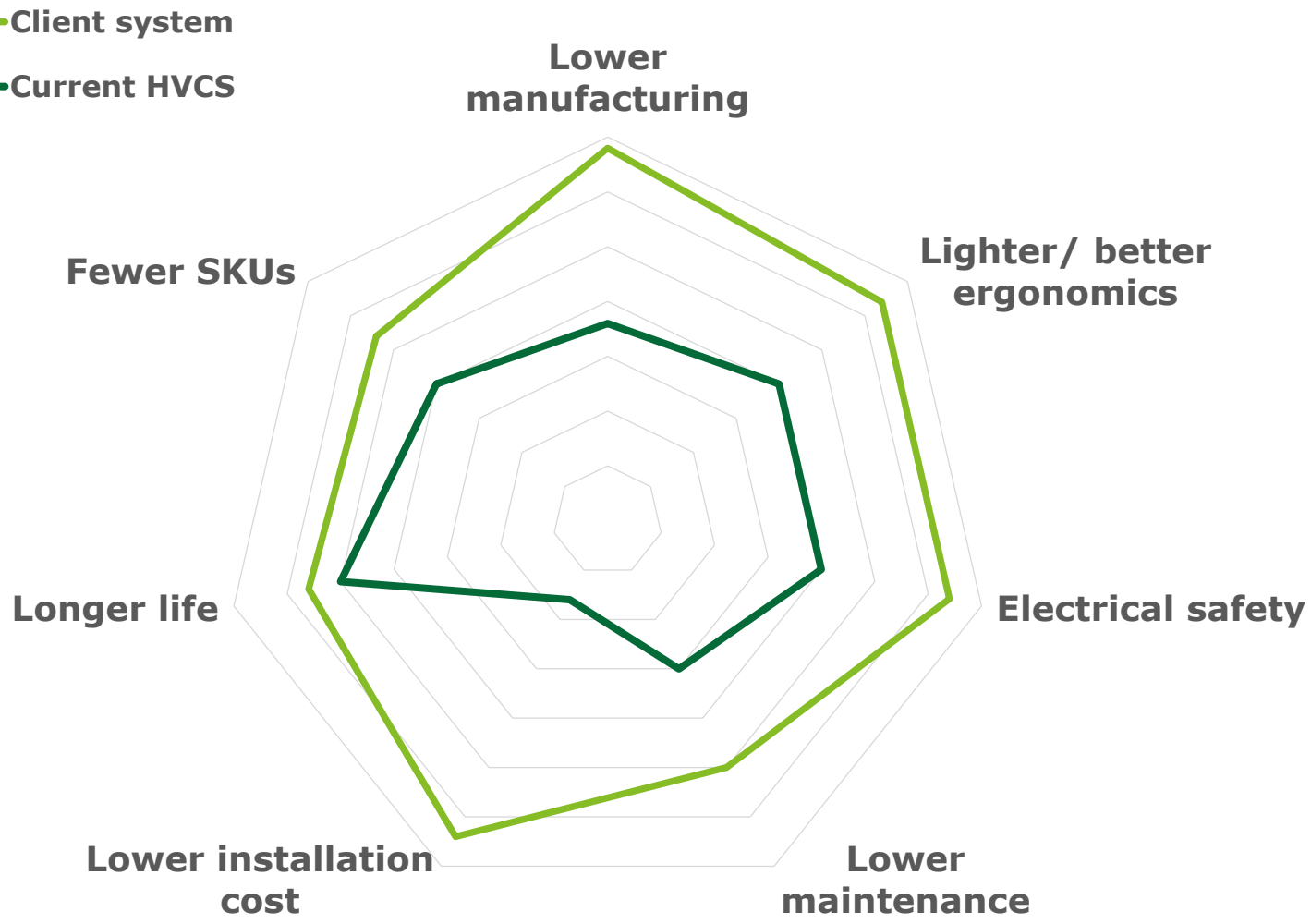
Asset assessment & earnings potential
- relative functional benefits



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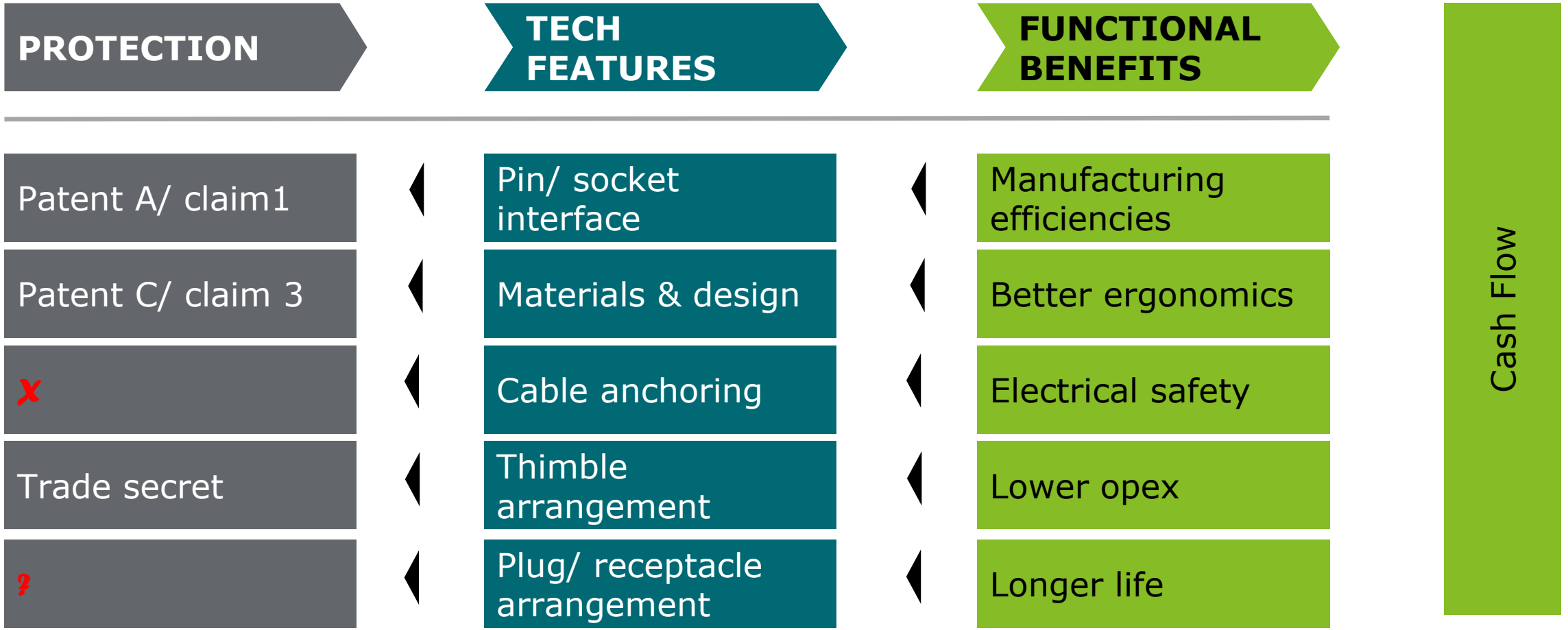
Asset assessment & earnings potential
- level of protection



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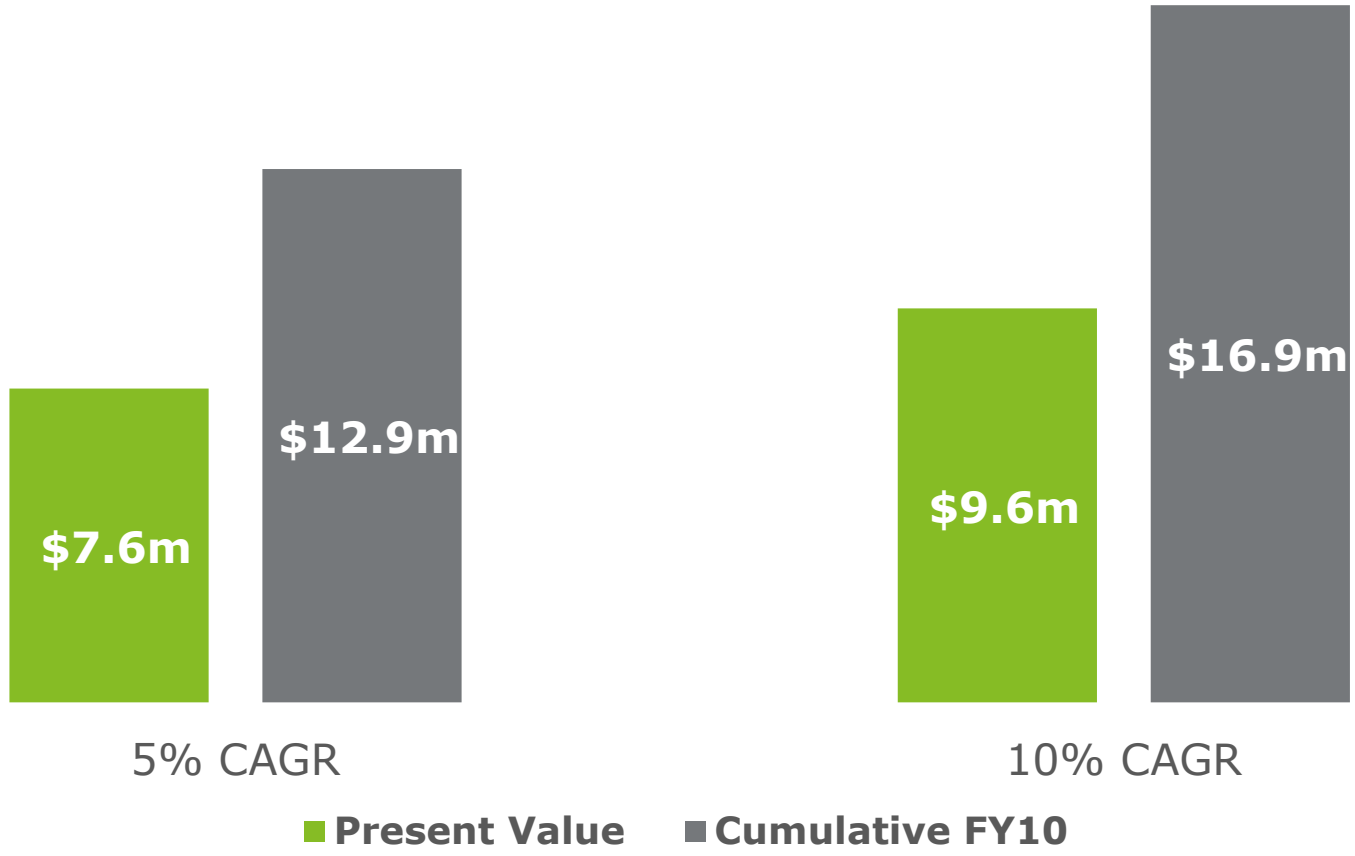
Value impact of changes in forecast sales

Present value of:

- $1M IP earnings in FY1, growing for 10 years at:
  - **5%** CAGR
  - **10%** CAGR
- 10% discount rate



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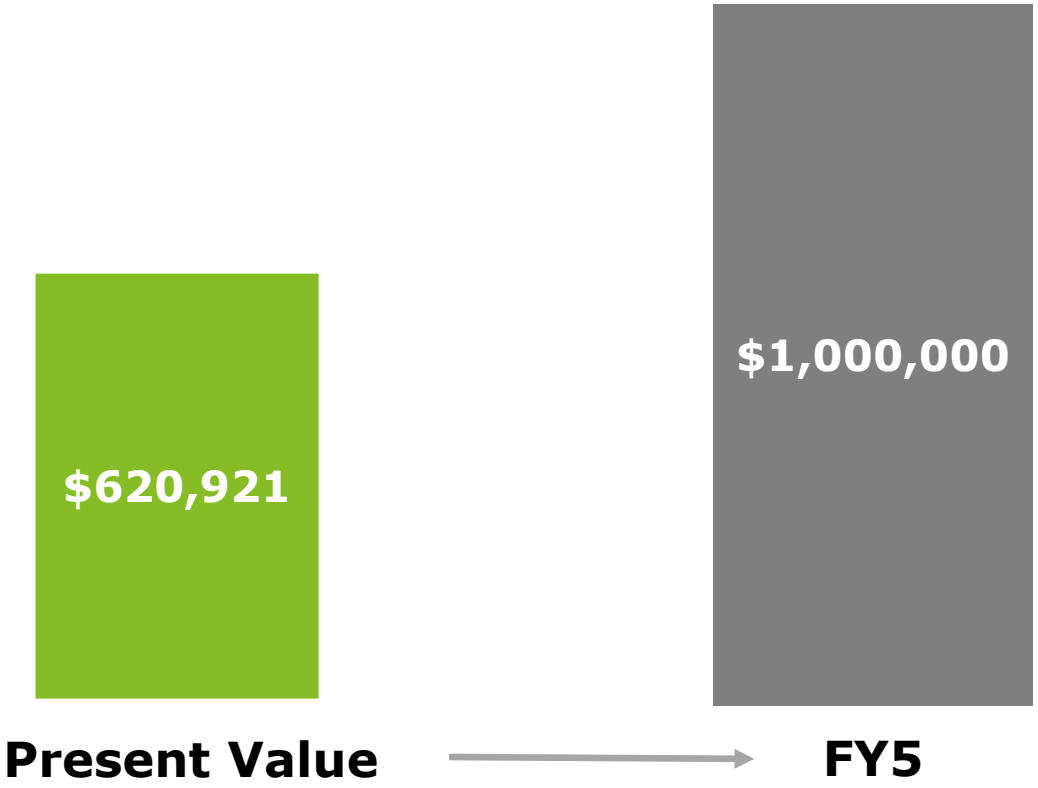
Value impact of time to market

Present value of:

- $1M in **5** years
- 10% discount rate



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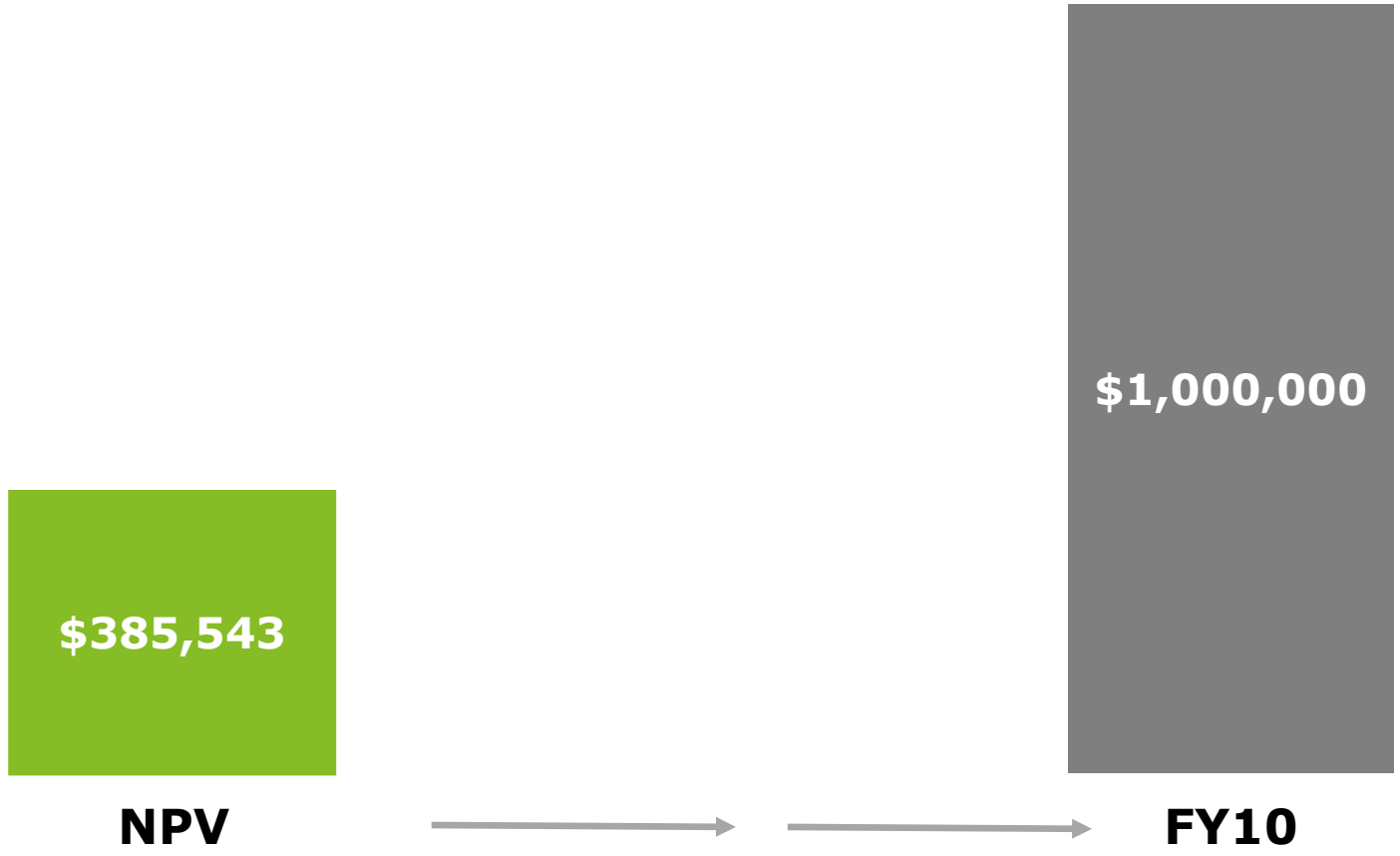
Value impact of time to market

Present value of:

- $1M in **10** years
- 10% discount rate



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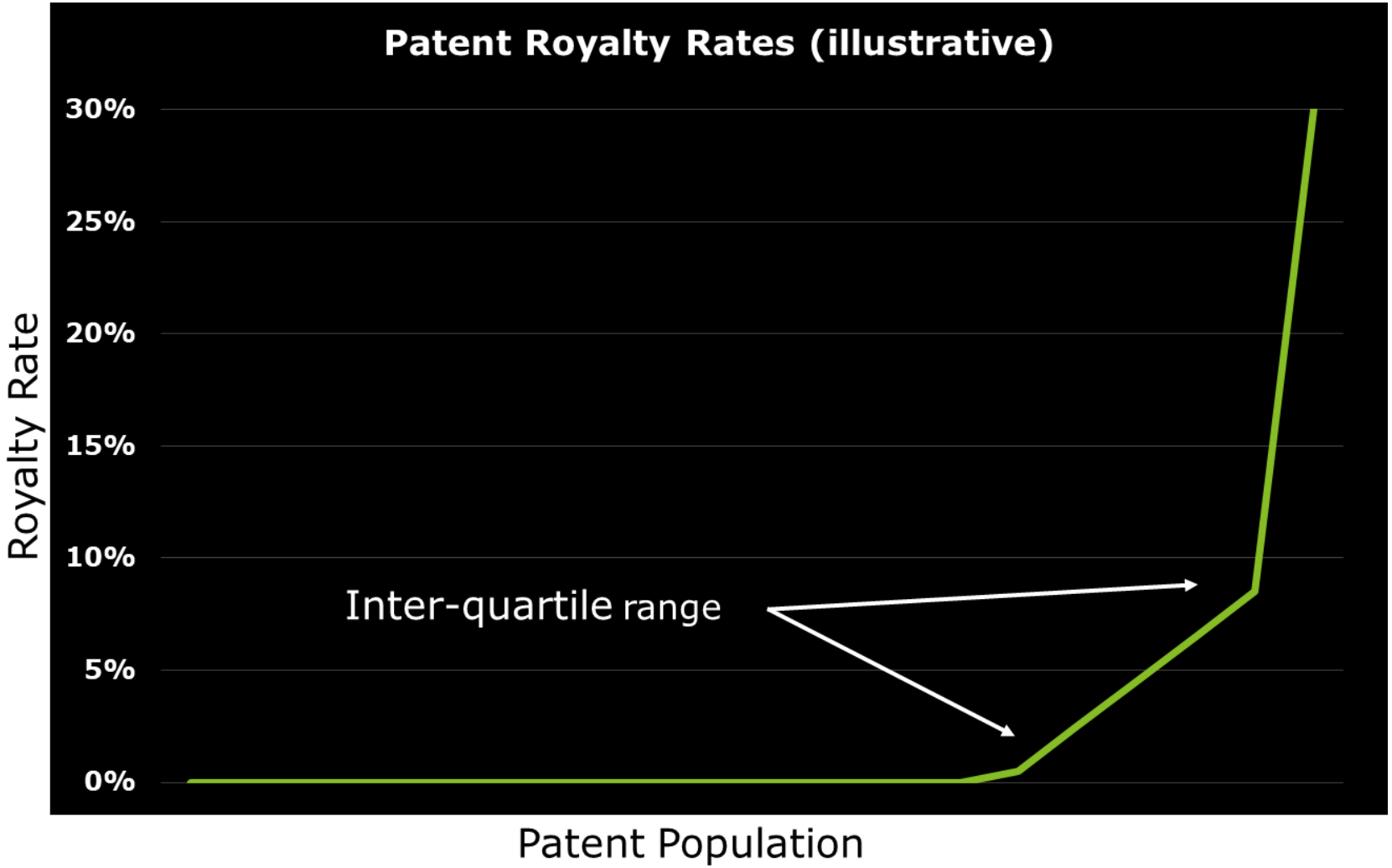
IP earnings

1. Combined Earnings
2. **IP Earnings**
3. Associated Costs
4. Risk
5. Economic life



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Costs associated with the IP

5. Useful Economic Life

1. Combined Earnings
2. IP Earnings
3. **Associated Costs**
4. Risk

- **Costs specific to the subject asset**
- **Development costs**
- **IP costs**

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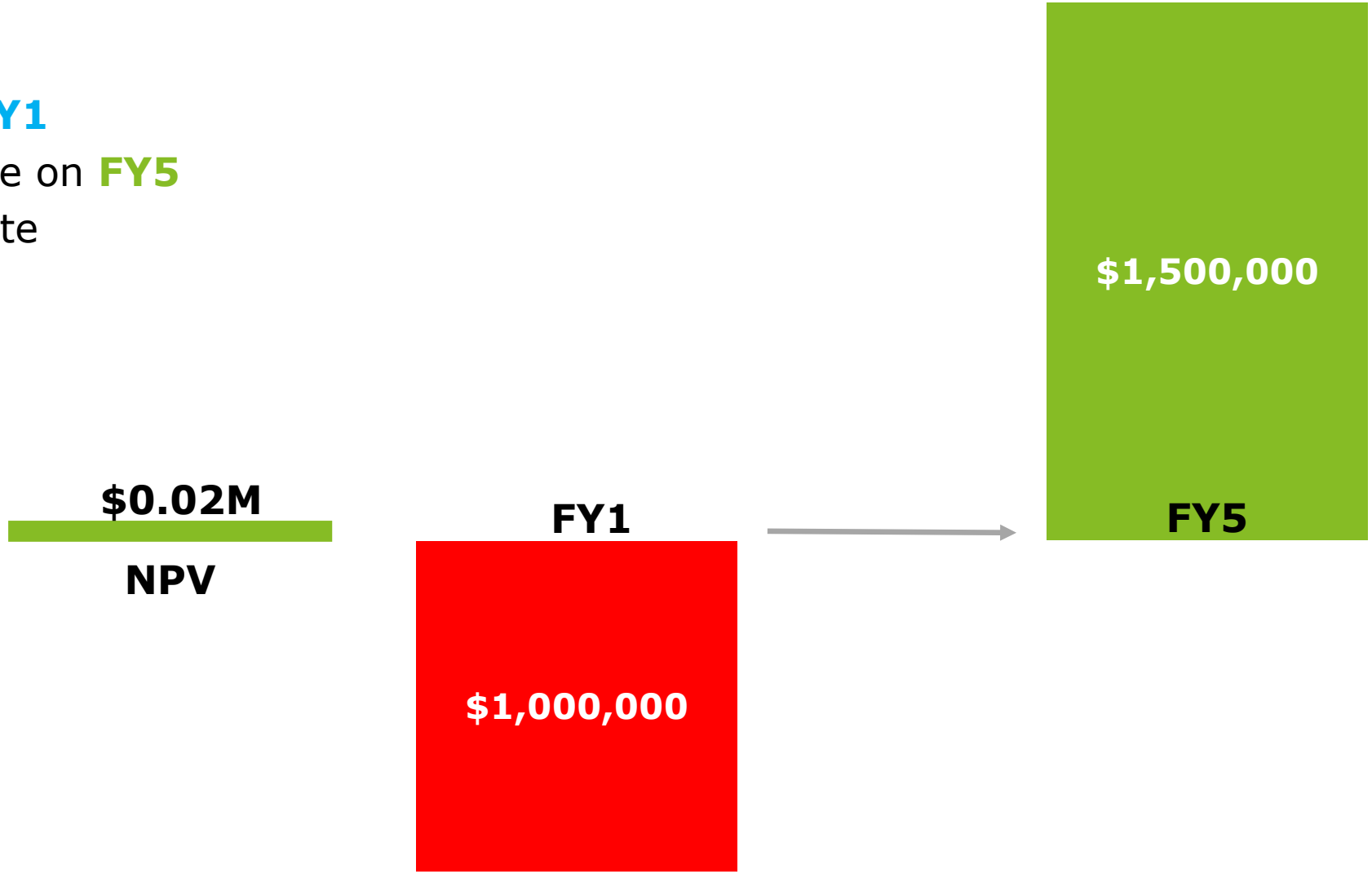
Value impact of up-front costs

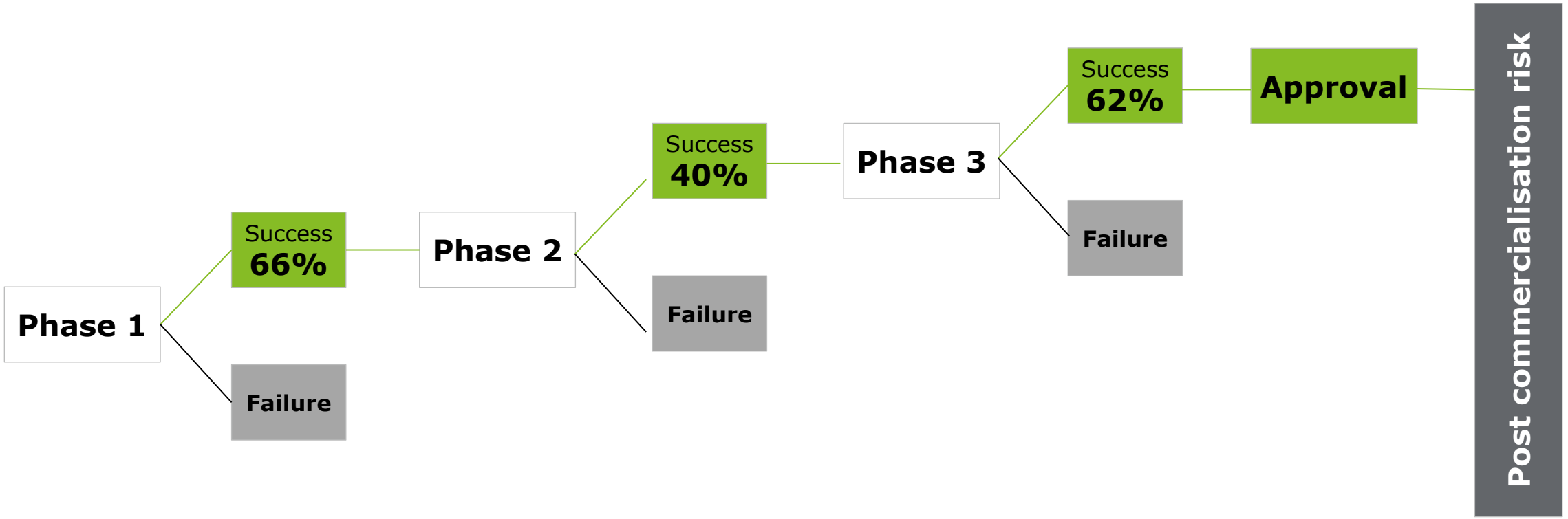
- Present value of:
  - $1M of cost in **FY1**
  - $1.5M of revenue on **FY5**
  - 10% discount rate



Development hurdles and risk

Remaining development time: ..... 7 years

Cumulative probability of market entry: 16%



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Value impact of risk weighting

Present value of:

- $1M in 10 years
- 11% **probability of success**
- 10% discount rate

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Value impact of discount rate

Cost of equity (CoE)

- Risk free rate
- Equity risk premium
- Beta
- Asset specific risk premium

Cost of debt (CoD)

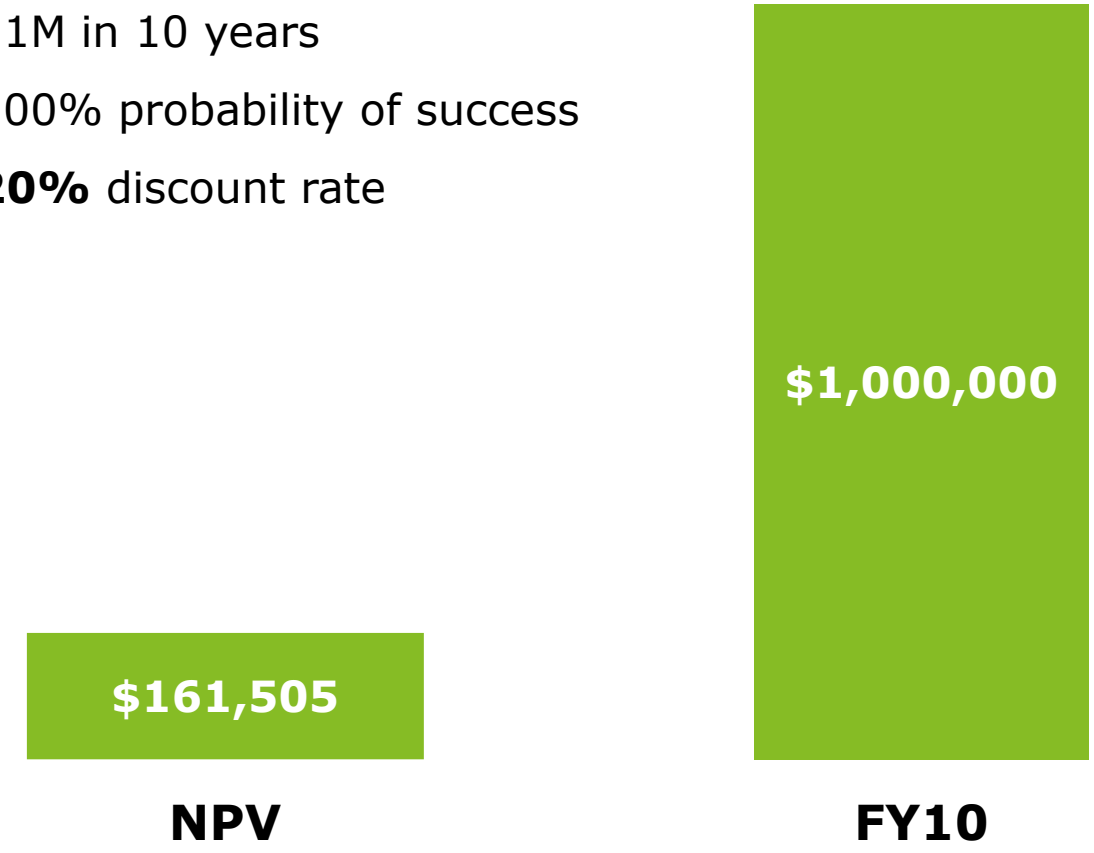
- Pre-tax cost of debt
- Less tax benefit

Weighted average cost of capital

- CoE X equity weighting
- CoD x Debt weighting

Present value of:

- $1M in 10 years
- 100% probability of success
- **20%** discount rate



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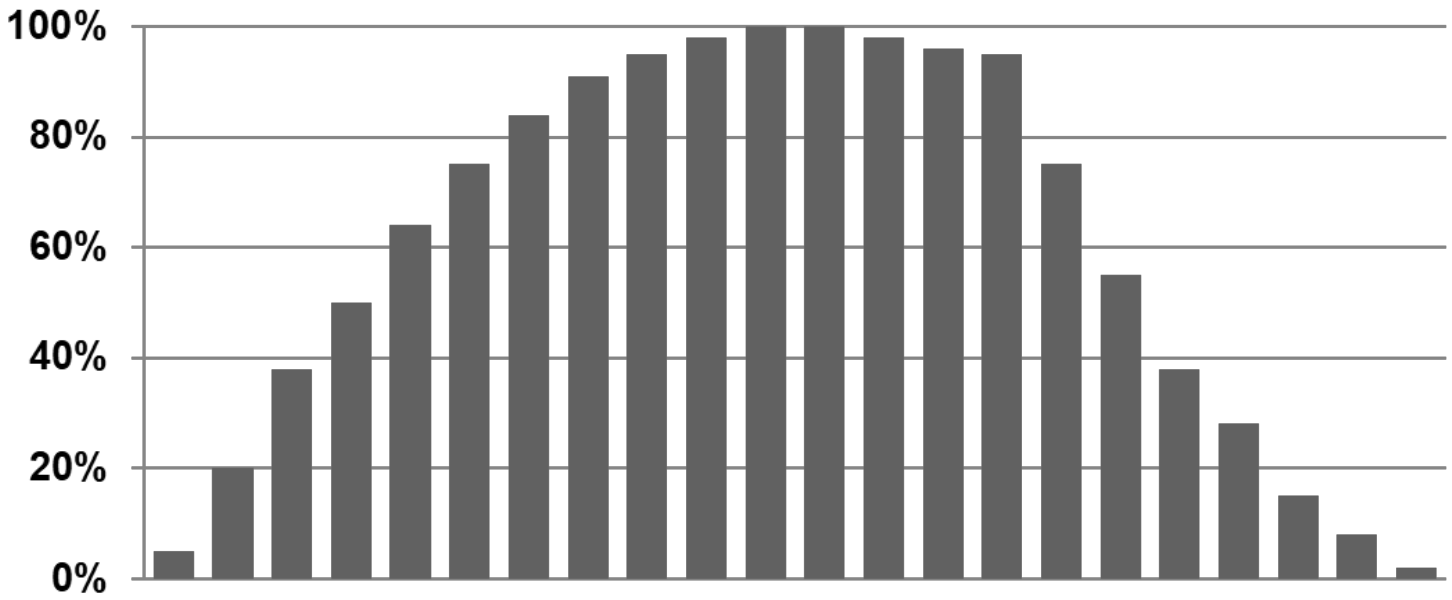
Useful economic life

1. Combined Earnings
2. IP Earnings
3. Associated Costs
4. Risk

5. Useful Economic Life



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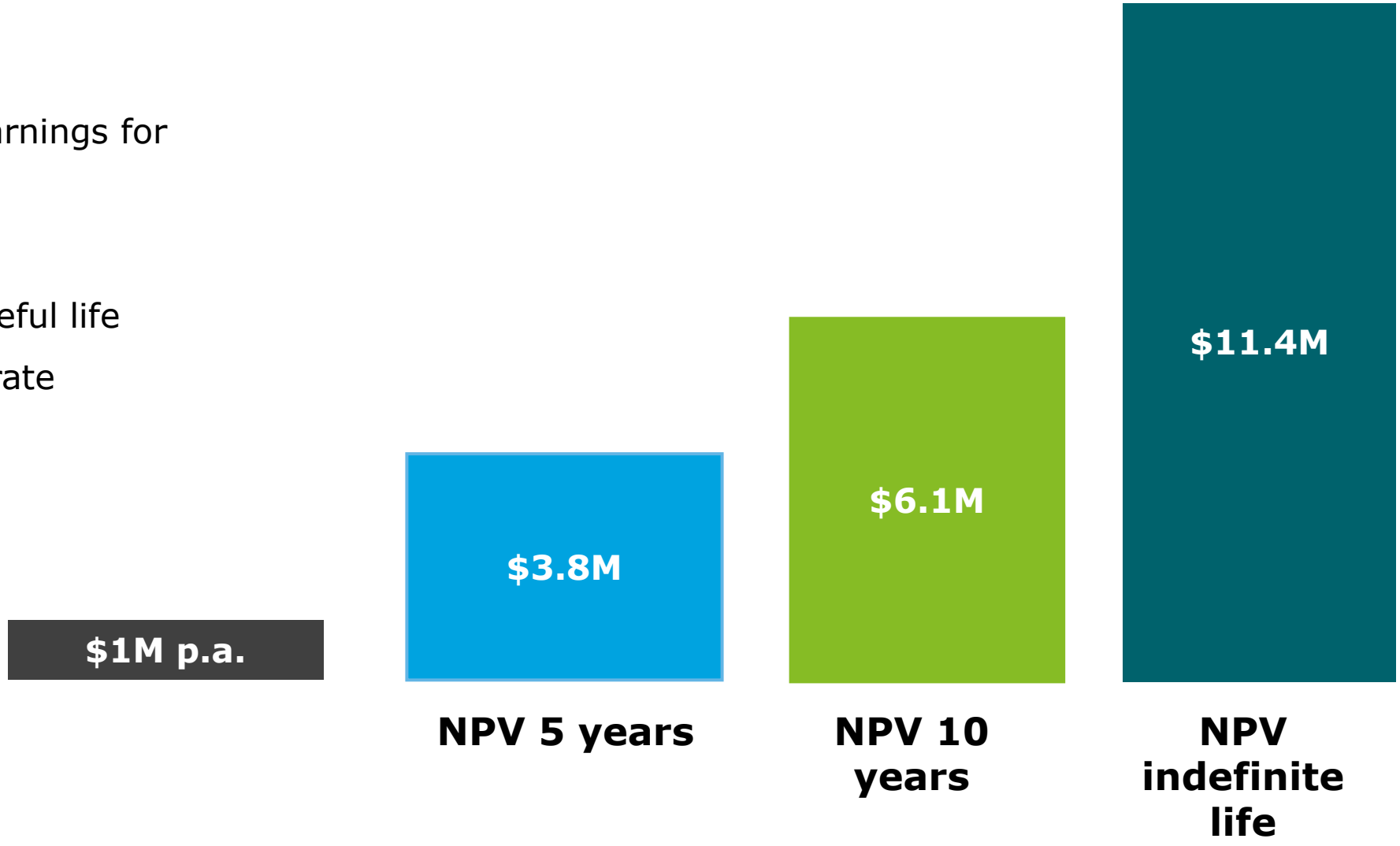
Value impact of economic life

Present value of:

- **$1M p.a**. IP earnings for
  - 5 years
  - 10 years
  - indefinite useful life
- 10% discount rate



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01

IP assets are complex

- Valuation requires multi-disciplinary inputs

02

Scope

- Fit for purpose
- Ensure client/ users aware of restrictions

03

Clear asset definition

- Imprecision undermines subsequent analysis

04

Legal characteristics

- Vary by jurisdiction
- Can significantly influence value
- Attorney inputs?

05

Functional characteristics

- Asset utility central to value
- Consider quality of supporting evidence

06

Economic characteristics

- IP economics
- Cross checks
- Do findings articulate the range of potential outcomes?

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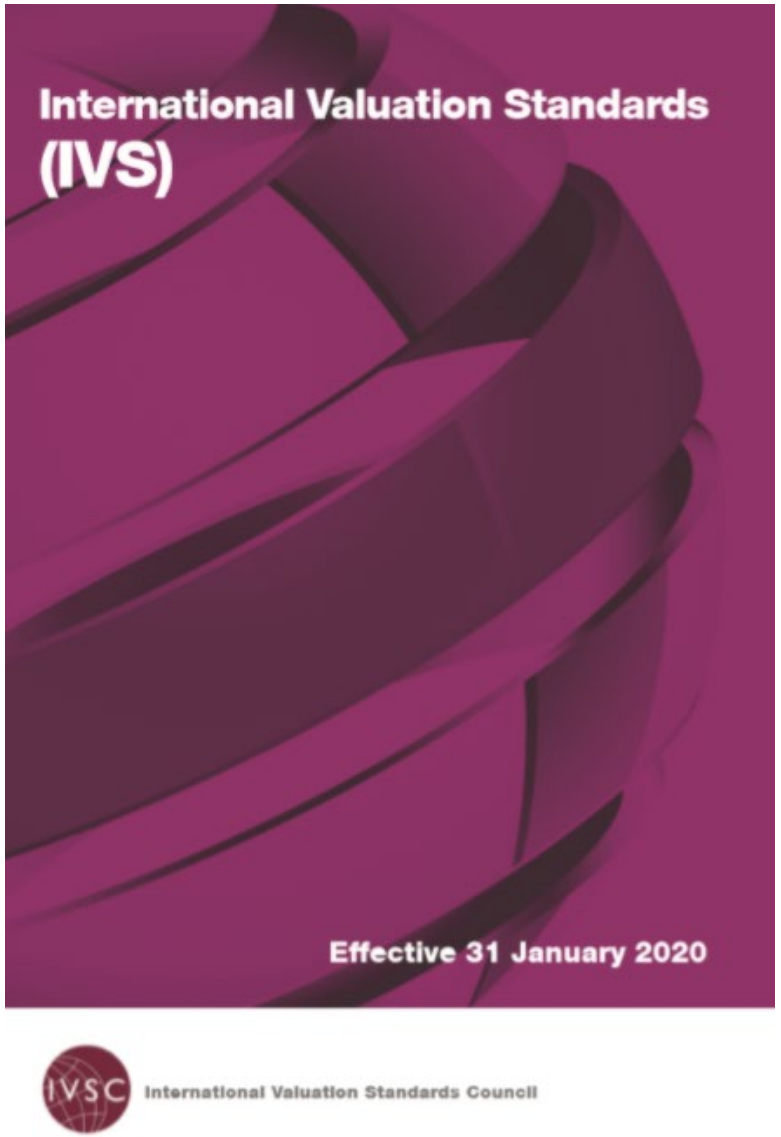
Guidance



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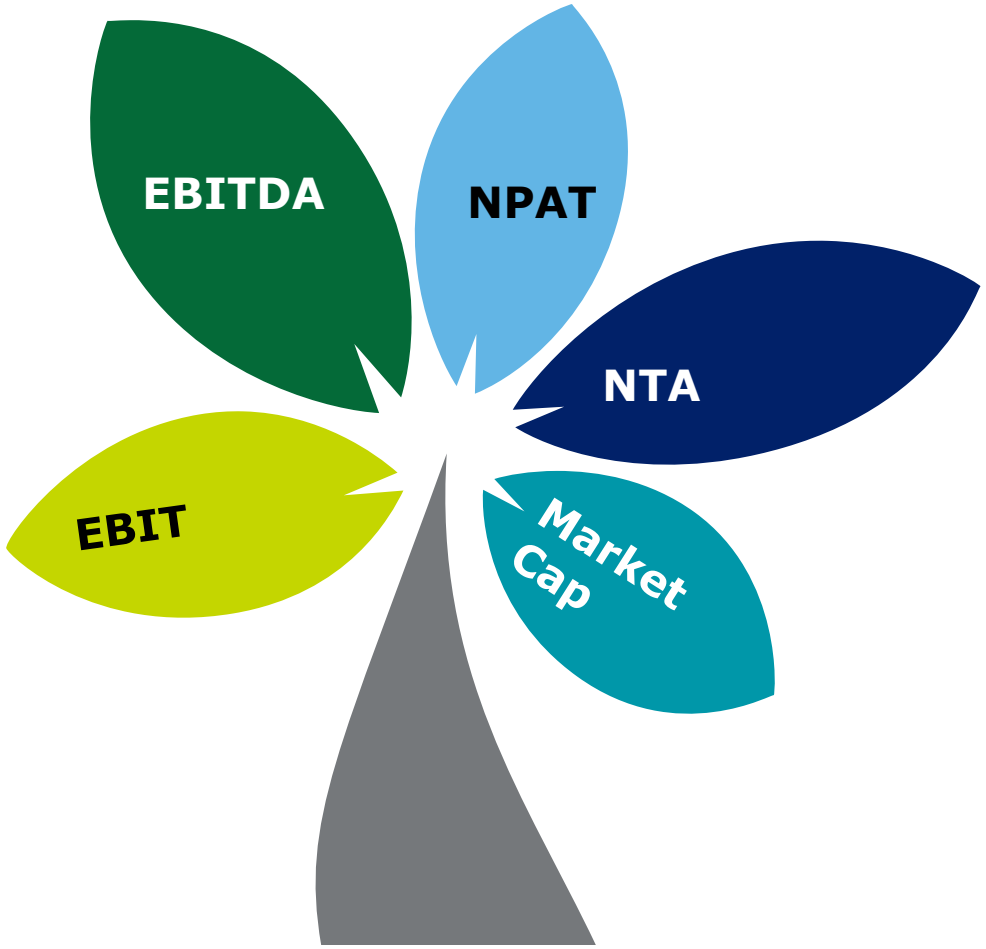
Finance jargon



Earnings before interest & tax

Earnings before interest, tax, depreciation and amortization

Net profit after tax

Net tangible assets

Market capitalization (share price x number of shares)

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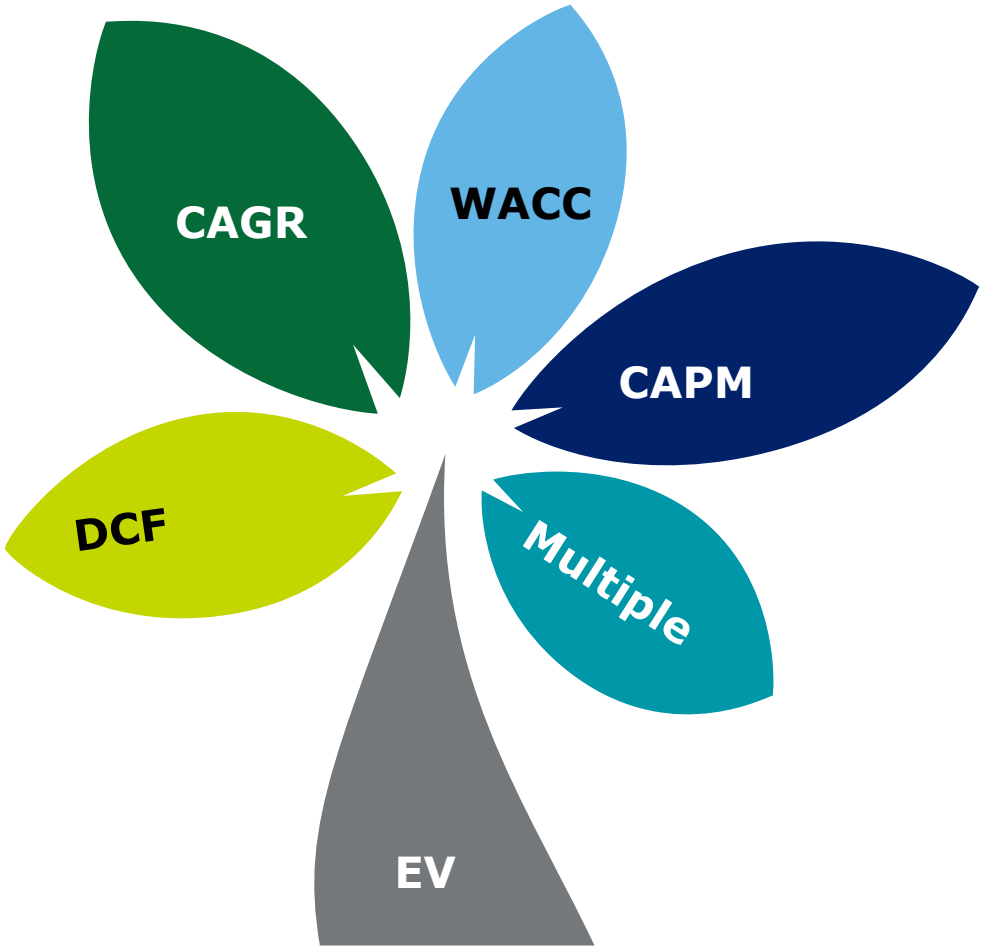
Valuation jargon



Discounted cash flow

Compound annual growth rate

Weighted average cost of capital

Capital asset pricing model

Market cap or EV/ EBIT or EBITDA or Revenue

Enterprise value

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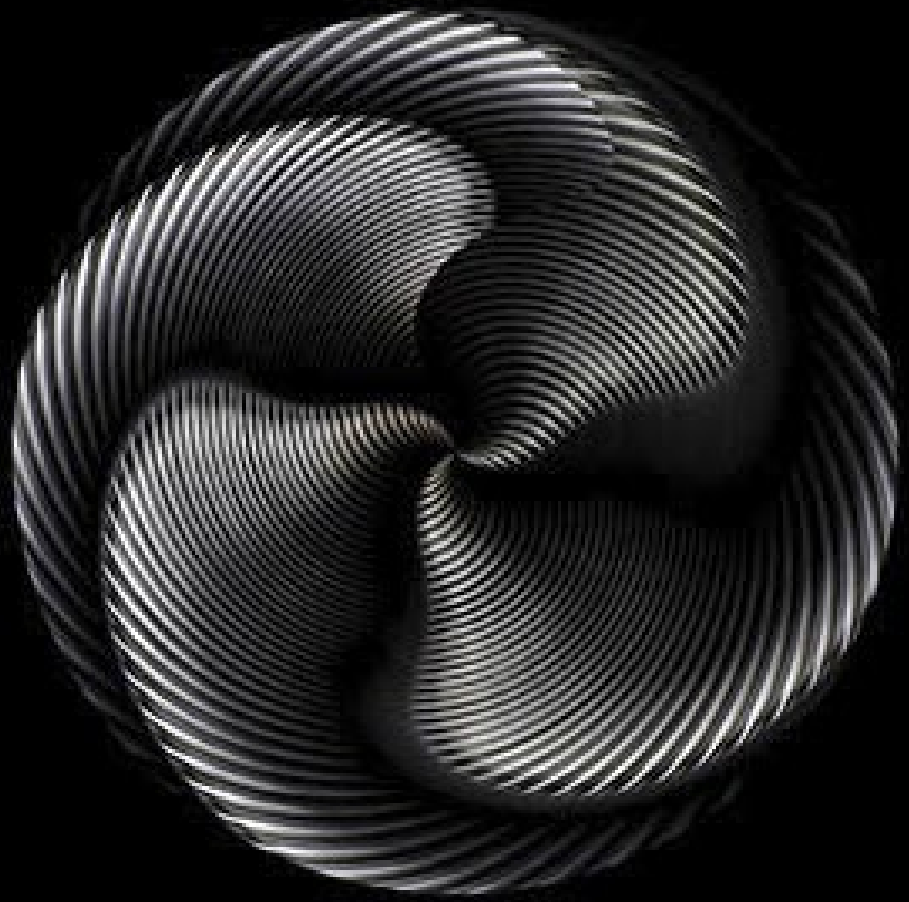

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