Hexagon AB – Six Sides to Every Story

Management front-run Hexagon investments through a fraudulent undisclosed third-party investment vehicle. Organic growth is **egregiously overstated**. Intentionally opaque disclosures mask **aggressive** accounting and **underperforming** acquisitions.

PLEASE READ IMPORTANT DISCLAIMER – PAGE 6

July 19, 2023 – Viceroy Research is short **Hexagon AB** (STO: HEXA-B). Hexagon is a corporate dictatorship run by the majority owner and controlling voter: **Melker Schörling**.

Melker-appointed Chairman & former Hexagon CEO, **Ola Rollén**, front-runs Hexagon investments through an investment vehicle that counts Schörling and Hexagon's top-brass as investors.

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*Viceroy believes management has **committed fraud**.*

Management have adopted an **aggressive acquisition strategy** which has remained largely unchanged for 25 years. Acquisition growth appears to be **intentionally misreported as organic growth**, which would otherwise rival LVMH. Acquisitions themselves appear to be **underperforming en masse**.

Aggressive accounting measures and corporate structure decisions put the **lipstick on the pig**. Dreadful and often **non-existent disclosures** appear to be a deliberate attempt to keep nosey critics at bay. Not us.

Strap-in. This is a big one.

Short Memories

Far from a cutting-edge tech powerhouse, **Hexagon is substantially the same business now as it was in 1998**, immediately prior to Schörling taking a controlling stake in the business. It has acquired greater interests in precision engineering and manufacturing and expanded into geospatial solutions. It has bought some best-in-class solutions for niche markets. **It also constantly misleads investors.**

- Hexagon (1998) was an acquisition-heavy industrials company reporting under precision engineering, niche manufacturing and agriculture specializations, all sectors in which it still operates.
- Hexagon (2023) hasn't changed and continues to buy safe, mature revenues, acquire R&D, reap earnings over short technological life cycles, and generate some synergies for improved earnings.
- Hexagon's main strategic objective is to grow the top line through acquisitions. It's reported organic growth claims, if true, would make LVMH blush.
  - **Viceroy's analysis shows Hexagon's organic growth is vastly overstated.**
- Hexagon **management are fad-opportunists**, who will vomit the latest buzzwords across sprawling annual report pages, such as "accelerating the industrial metaverse".
- As a Swedish company sporting a dual class share structure, Hexagon's disclosures are predictably appalling as management does not have to answer to lower-class minority stakeholders.
- Far from being the environmental evangelists that management like to portray themselves as, Hexagon is a powerhouse in supplying the oil and gas industries, which still form substantial portions of its revenue.

> Rollen, who in his youth played the guitar in a rock band that cut a record deal with ABBA manager Stikkan Anderson, has a knack for showmanship.
>
> Nowhere was this more evident than when he took the stage before thousands of customers in an Orlando, Florida, ballroom in June 2011 to Robbie William's raucous "Let Me Entertain You" to deliver a keynote that smacked more of show business than corporate presentation.

Figure 1 – Reuters – From Tuna to Tech – 27 Mar 2013

The Board, Management, Governance & the Greenbridge Slush Fund

Hexagon is a masterclass in corporate governance failure.

- Billionaire Melker Schörling holds 21.4% of capital and 42.4% of votes[1], some through investment vehicle Melker Schörling AB (**MSAB**).
  - Hexagon's chairman to end of 2022 and current director, **Gun Nilsson**, was simultaneously the CEO of **MSAB** from 2017 – 2022.
- Ola Rollén, Hexagon's current Chairman, former CEO, and board member since 2000, **sold half of his interests in Hexagon** to found an investment vehicle called **Greenbridge**.
  - Greenbridge's has raised hundreds of millions of Euros from MSAB, Hexagon management (CFO, CTO, COO, VPs), independent nomination/election committee members, third party distributors, and other significant Hexagon and **MSAB** shareholders. We are yet to determine the identity of a few Greenbridge shareholders, but expect them to be insiders.

Greenbridge has front-run Hexagon investments for the self-enrichment of Greenbridge investors (i.e. Hexagon insiders) and to the detriment of Hexagon's other shareholders. One example is Hexagon's investment in Divergent Technologies:

- Hexagon's US$100m investment in Divergent Technologies in December 2022 was **preceded by a Greenbridge investment** in Divergent, masked through a consortium titled "Blackbird".
  - The "Blackbird" SR-71 was the inspiration for Divergent founder Kevin Czinger's hobby supercar project, which Greenbridge have also invested in.
- Divergent's pre-Hexagon valuation was over US$1b. In keeping with its poor disclosures, Hexagon has not provided any details as to the substance of its investment.
- Given Greenbridge's immense capital pool, we believe there is significant risk of other **undisclosed related party transactions**.
- It appears that most of Hexagon's **management have greater financial interests in Greenbridge** than they do in Hexagon. It would be easy to draw a conclusion from this that the company is being run in alignment with the interests of a single shareholder group which appears to prejudice other shareholders.

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*Viceroy believes management's undisclosed relationship with Greenbridge constitutes **fraud**.*

Gun Nilsson, Hexagon former chair, current audit committee member, and former CEO of MSAB, is also the Chair of the Swedish Corporate Governance Board (**SCGB**).

- The Swedish Corporate Governance Board sets the Swedish Corporate Governance Code ("the Code") in a self-regulating market, as an alternative to legislation. **The chairman of the SCGB does not appear to be self-regulating**.
- The Corporate Governance Code developed by **SCGB** stipulates that a majority of the members of the board of directors are to be independent of the company and its executive management, and at least two of such independent members must also be independent of the company's majority shareholder/s.
- Similarly, the Corporate Governance Code notes that the majority of the audit committee's members are to be independent of the company and its executive management.
- Management bonuses are not aligned with organic growth or R&D, they are aligned with earnings, which are achieved via acquisitions.
- We note that given managements, directors, and major shareholder's apparently vast overlapping financial interests and employment duties, they do not appear to meet independence conditions.

[1] https://investors.hexagon.com/en/share-information/shareholders

Organic Growth & Value Destruction

A forensic investigation into Hexagon's hundreds of subsidiaries blows holes in management's growth claims.

- Hexagon management have reported organic growth figures in high-single digits over the last 25 years, which would make LVMH blush.
  - It is difficult to independently estimate accumulated organic growth given Hexagon's acquisition timings, however we estimate this figure to be multiple billions of Euros over the last 10 years.
  - **Our analysis shows that substantially all of this organic growth is mischaracterized and blatantly misreported acquisition growth.**

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*Our analysis shows that **Hexagon has only accrued ~€460m of organic growth since 1998**.*

Hexagon Organic Growth Analysis	Total
Net acquisition consideration	**11,348**
Prior period revenue	468
Acquired revenue	4,452
Disposed revenue	(220)
Revenue (estimate)	**4,700**
Revenue (reported)	5,161
Delta (organic growth)	**460**

Figure 2 – Viceroy Analysis

- Viceroy **has a substantially complete database of financial top-line data of Hexagon acquisitions** to 2017 from which we make these assumptions. From 2018, Hexagon acquisition disclosures become increasingly poor, even at the subsidiary level. We extrapolate estimates from the previous **20 years of data, and representative sample data from 2018 – 2022**.
  - **A vast number of Hexagon acquisitions are underperforming**. Representative samples of well-documented Hexagon acquisitions appear to show negative growth at the subsidiary level post-acquisition.
  - A vast number of Hexagon acquisitions are immediately dissolved and merged into existing Hexagon umbrella companies. Many post-acquisition filings are therefore not available, and acquired revenues in reporting periods would presumably be indistinguishable from organic growth.
- Viceroy has provided various **case studies** of underperforming acquisitions, insolvent asset purchases, and instructions to local corporate registries to replicate our workings.

Hexagon acquires R&D, which has accrued €9.6b of unimpaired Goodwill on its balance sheet. Asset turnover against comps significantly underperform, suggesting acquisitions are underperforming.

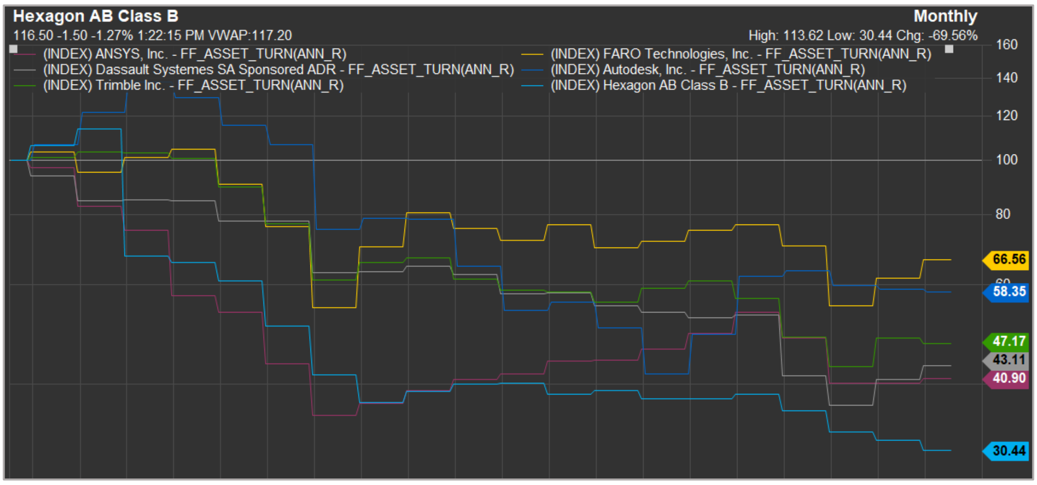

Figure 3 – Viceroy Analysis (Factset)

Aggressive Accounting

Viceroy believes Hexagon employs overly aggressive accounting measures in order to boost margins and mask operational deficiencies.

- In 2021 Hexagon quietly changed the useful life of its capitalized R&D from 2-6 years to 2-10 years. This immediately improved earnings.
  - We note that the only performance condition on management bonuses is EPS.
- Hexagon acquires distributors, salespeople, competitors, third party software, and tangible businesses with short technology cycles that quickly and demonstrably become redundant. Its goodwill is like-for-like with R&D for the purposes of analysis.
  - Despite showing that a vast number of Hexagon's acquisitions underperformed post-acquisition, and showing others no longer even appear to exist: **Hexagon has only made €8.5m impairments to €9.6b of Goodwill over 25 years and hundreds of acquisitions.**
  - Representing almost 60% of total assets: Goodwill is (by far) Hexagon's largest asset class.
  - Per above, we note that we believe goodwill will come under scrutiny and new businesses combinations may be treated as asset purchases instead, which will be subject to amortization.
- Viceroy firmly believe that Hexagon's acquisition outflows are like-for-like with R&D. It acquires distributors, salespeople, competitors, third party software, and tangible businesses with short technology cycles in lieu of conducting its R&D.
  - Our analysis reflects 50% of acquired goodwill as capex. Given that it appears substantially all of Hexagon's organic growth appears to be derived from acquisitions, we believe this is conservative.

Free Cash Flow Yield	
Market cap (EUR - 14 Jul 2023)	27,685
FCF yield (unadjusted)	2.81%
Viceroy Adjusted FCF yield	0.96%

Figure 4 – Viceroy Analysis

Audit(or) Issues

In 2021, out of the blue, the Company appears to have replaced EY with PWC after more than two decades as external auditors.

- IFRS 3 (Business Combinations) amendments were adopted in 2020, the year that EY's Troberg was appointed as lead external auditor of Hexagon. We believe that it is plausible EY was replaced as auditor for being overly nosey.
  - We believe an earlier introduction of IFRS 3 amendments would have created sweeping differences on Hexagon's balance sheet as acquired distributor relationships would be subject to amortization, and not held indefinitely on the balance sheet as unimpaired goodwill.
- IFRS 15 amendments were adopted in 2018 immediately prior to Troberg's appointment. Predictably, Hexagon's disclosures do not provide enough detail to substantiate a claim that right-to-use sales unjustly inflate revenues. But this is a key audit matter and should be subject to further scrutiny. We believe that it is plausible that EY probed this matter more thoroughly, possibly leading to their replacement.
- Hexagon's financial statements are a perfect example of the lazy manner in which information about Hexagon's business operations is conveyed to shareholders. They are atrocious.
  - Investors have mostly been treated to hilariously inconsistent financial data sets of cherry-picked acquisitions. Hexagon has never tracked or made an attempt to follow up on the status and financial health of any of its acquisitions over time. For a company that has indulged in such an aggressive acquisition strategy for over two decades and that has goodwill making up almost 60% of the company's assets in 2022, this beggars belief.

Key takeaways

There is no doubt in our minds that Hexagon has made some great acquisitions of best-in-class assets. Similarly, we have no doubt that many acquisitions and internally generated IP have been profitable. We even firmly believe that Hexagon can genuinely provide synergies in the acquisitions it has made. This is not in dispute.

Hexagon is not a zero, but it has major problem:

- The finesse of a streamlined tech-savvy business is lost on hundreds of acquisitions of distributors which appear to underperform post-acquisition and revenue run-off streams of mature market operators.
- The premise of vast organic growth repeatedly represented by management is simply untrue. Hexagon buys safe, mature revenues, acquires R&D, and reaps earnings over relatively short technological life cycles. It is an industrials conglomerate.
- Hexagon's short technological life cycles appear to accelerate the redundancy and inefficiency of its assets, as dictated by asset turnover.
- It is not in the management's interest to generate organic growth or spend money on R&D. It is in their interest to acquire earnings, as this dictates management bonuses.
- Acquisition of distributors may not have a significant impact on revenue immediately but will impact margins.
- Hexagon has enormous governance issues, and its **management appears to be committing fraud.**

On this note: we believe a valuation of Hexagon shares is a futile exercise. There is simply not enough information and transparency from Hexagon management to conduct any meaningly valuation analysis.

Viceroy believes this report details significant downside to the share price and enormous risk in HEXA-B.

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Attention: Whistleblowers

Viceroy encourages any parties with information pertaining to misconduct within Hexagon, its affiliates, or any other entity to file a report with the appropriate regulatory body.

We also understand first-hand the retaliation whistleblowers sometimes face for championing these issues. Where possible, Viceroy is happy act as intermediaries in providing information to regulators and reporting information in the public interest in order to protect the identities of whistleblowers.

You can contact the Viceroy team via email on viceroy@viceroyresearch.com.

About Viceroy

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1. Background & Brief

Hexagon is a €28b market cap Swedish-listed industrial mapping/surveying/measurement and industrial design enterprise software roll-up.

The company sports a dual class share structure, which grants control to the largest shareholder and billionaire Melker Schörling who holds 21.4% of capital and 42.4% of votes through an investment vehicle.

Industrial Enterprise Solutions (**IES**)

The IES segment provides 3D computer aided design and engineering solutions for industrial manufacturing and power/energy plants. It accounts for 48%-51% of Hexagon's revenues and has done every year since 2015 (when revenues were separated into segments). This segment includes:

- Metrology software including coordinate measurement machines (**CMM**) and laser trackers/scanners.
- Computer aided design (**CAD**) software & Computer aided manufacturing (**CAM**) software
- Design optimization, productivity & asset lifecycle management solutions

Geospatial Enterprise Solutions (**GES**)

The GES segment provides surveying and mapping solutions for construction and mining companies, primarily in the USA and EU (surveying is the single largest customer category and accounted for 20% of net sales in 2020). IES accounts for 49%-52% of Hexagon's revenues and, like IES, has done every year since 2015. This segment includes:

- Laser scanners
- Airborne cameras & unmanned aerial vehicles (UAVs)
- Monitoring equipment
- Mobile mapping technology & precise positioning
- 3D mapping, surveying, construction safety, mining & agriculture software.

Key Takeaways

It is implausible that GES and IES segments have grown at the exact same rate every year for at least 7 years, during which time total revenues have doubled. Especially as an acquisition-heavy roll-up, this makes very little sense.

Strategic Objectives

Hexagon's main strategic objective, in no uncertain terms, is to grow the top line through acquisitions. This may seem like a bizarre claim to make alongside many assertions by management that Hexagon has experienced impressive organic growth over the last 20 years, allegedly compounding in the high single digits.

We explore the veracity of Hexagon's acquisitions and its management's claims about organic growth in this report. The picture painted by management, of a thriving high-tech, organically growing enterprise at the cutting edge of its industries, is very far from the picture painted to us by the evidence that we've examined.

A brief history of short memories

Schörling brought in current BoD member Ola Rollén from Sandvik to turn the business around in 2000. Rollén has since launched media campaigns with a narrative that, under his leadership, Hexagon effectively exited all its original 'core' businesses and embarked on a multi-decade M&A spree primarily focused on geo-location, mapping and measurement hardware and software, and industrial design and simulation software[2].

From tuna to tech, Hexagon breaks Swedish mould

Figure 5 – From tuna to tech, Hexagon breaks Swedish mould.

[2] https://www.reuters.com/article/ctech-us-sweden-hexagon-idCABRE92Q0CS20130327

This is stretching the truth. In 1998, immediately prior to Schörling's involvement, Hexagon was substantially the same business as it is now. It was an industrials company reporting under precision engineering, niche manufacturing and agriculture specializations.

Tuna import was as insignificant a portion Hexagon sales/earnings in 2000 as the manufacture of British school tables is now through Planit subsidiary British Thornton.

Red flags were not well hidden, particularly corporate presentations that "smacked more like show business than corporate presentation". This concisely sums up our view of Hexagon:

LET ME ENTERTAIN YOU

Rollen, who in his youth played the guitar in a rock band that cut a record deal with ABBA manager Stikkan Anderson, has a knack for showmanship.

Nowhere was this more evident than when he took the stage before thousands of customers in an Orlando, Florida, ballroom in June 2011 to Robbie William's raucous "Let Me Entertain You" to deliver a keynote that smacked more of show business than corporate presentation.

Figure 6 – From tuna to tech, Hexagon breaks Swedish mould.

Hype-Train – All Fur Coat, No Knickers

Hexagon's management, it seems to us, are fad opportunists. For instance: while we do not have anywhere near adequate transparency into any of the billions of Euros acquisitions Hexagon made in 2022, management has dedicated many pages to hype, such as:

- Absurdist, pre-revenue, likely-not-even-AI projects
- Pre-revenue environmental initiatives (likely to mask their immense contribution to the oil & gas industry)
- Live-data-tracking analysis innovations which appear to resemble simple cloud capabilities: and/or
- "Accelerating the industrial metaverse."

Hexagon's acquisitions are promoted as "market leaders", despite many operating in the same market, and many are being demonstrably acquired from insolvency proceedings, or are in negative growth spirals.

Our analysis suggests that Hexagon is very far from being a leading-edge tech enterprise with promising organic growth. Instead, it buys safe, mature revenues / R&D, reaps earnings over short technological life cycles, and has demonstrably generated some group synergies on fleeting revenues. It is an industrials conglomerate. It is mistakenly being valued as a growth tech company and needs to be re-rated imminently.

We have never encountered a management team willing to commit so much blatant misrepresentation in its annual reports.

Environmentalism

We appreciate Hexagon's healthy appetite to tackle the climate crisis. We don't see how this is compatible with significant investments in assets to serve the oil & gas, dirty power and resources industries which make up material portions of Hexagon's sales.

In 2015, its annual report cover appears to be an oil refinery, and it openly brags about its necessity in the oil and gas industry.

Figure 7 – Hexagon 2015 Annual Report

Hexagon's own sustainability value chain, ironically, assumes many of its customers will go out of business.

2. Governance and the Board

Billionaire Melker Schörling holds 21.4% of capital[3] (Bloomberg states 17.97%) and 42.4% of votes through an investment vehicle. Similar to SBB, this dual-class structure itself is established to forgo the interests of minority shareholders and does not give particular credibility to the independent nature of the board.

This section will document:

- A management slush fund used to front-run Hexagon investments.
- Audit Committee governance failures
- Independence failures

The Olla Rollén Super-Secret Hexagon-Management **Slush Fund**

The track record of key executive and former CEO Ola Rollén is slightly odd. Rollén was previously investigated for insider trading related to an M&A deal[4]. Rollén was ultimately acquitted in 2019. The circumstances around these transactions and Rollén's outside interests turn out to be of greater concern.

In 2015, Ola Rollén sold half of his Hexagon shares to found Greenbridge, an investment vehicle[5]. Schörling's investment vehicle, Melker Schörling AB, also had a significant interest in this vehicle since at least 2015[6].

From or since that time, Greenbridge has amassed a number of investors. Many of them are Hexagon executives, hexagon third-party distributors, and hexagon directors. Many others remain unknown.

Given the share capital, it appears that Hexagon management has substantially greater financial capital at risk in Rollén's investment vehicle than in Hexagon.

Greenbridge Shareholders	UBO	Hexagon Link	Shares	%
Elsa Bonnier	Bonnier Group	Gun Nilsson director of Bonnier Group	74,163,974	9.15%
Certo AB	Robert Belkic	**CFO (former)**	4,087,497	0.50%
Citrava Invest Ltd	Kent Johnny Andersson	**M&S Computing Investments Inc (Intergraph)**	8,159,148	1.01%
Flamboyant Ltd			29,639,919	3.66%
FundRock Managament Company S.A.		Shareholder / Debtholder	6,274,938	0.77%
Norbert Hanke		**COO / Human Resources / IT Functions.**	3,137,469	0.39%
Alan Henneby		Greenbridge CFO	100	0.00%
Iskossala Ltd	Ola Rollen	**Director / Former CEO**	150,452,204	18.57%
Emannuel Lang		Greenbridge MP	1,170,844	0.14%
Li Hongquan		**President - China**	5,439,433	0.67%
M&V Kennedy Super Account	Malcolm Kennerdy	**Distributor / Subsidiary Director**	2,303,117	0.28%
Melker Schorling AB	Melker Schorling	**Major Owner**	154,427,059	19.06%
Monesi Forvaltning AB	Henrik Didner	**Nomination & election committee, Hexagon / Hexpol**	18,424,940	2.27%
Multi Spectrum One Inc		N/A	7,189,314	0.89%
Rollen Family Revocable Trust	Ola Rollen	**Director / Former CEO**	3,974,855	0.49%
Bo Pettersson		**CTO (former)**	5,527,481	0.68%
Ramsbury Invest AB	Persson Family	MSAB & Hexa shareholders	124,061,846	15.31%
SEB-Stiftelsen	Pension fund		51,812,178	6.39%
Mattias Stenberg		**President - Asset Lifecycle Division**	3,684,988	0.45%
UIE plc		Shareholder MSAB	78,424,852	9.68%
Veikko Laine Oy	Pasi Laine?	Gun Nilsson on Board of Konecranes with Pasi Laine	31,374,691	3.87%
Wasa Chip sarl	Stena AB		39,218,364	4.84%
West Investing			7,409,979	0.91%

Figure 8 – Viceroy Analysis

Hexagon management's side-dealings with Greenbridge are completely undisclosed.

[3] https://investors.hexagon.com/en/share-information/shareholders
[4] A summary of Ola Rollén's trial against prosecutors can be found in Annexure 4
[5] https://www.dn.se/ekonomi/lojalitetskonflikt-nar-vd-investerar-vid-sidan-om/
[6] https://web.archive.org/web/20170218063110/http://www.affarsvarlden.se/bors-ekonominyheter/rollens-greenbridge-uppges-investera-300-miljoner-i-startup-6801581

While Greenbridge's financials are in transparency black sites, the fund has actually disclosed several of its investments on its website just a few weeks ago!

From limited disclosures, Viceroy have identified Greenbridge front-running Hexagon investments.
*We believe this constitutes **fraud**.*

Related party disclosure requirements are covered under IAS 24. Details can be found below:

https://www.iasplus.com/en-gb/standards/ias/ias24

Divergent Technologies – Convergent Interests

In December 2022, Hexagon announced a US$100m investment in Divergent Technologies, a "global leader" in digital reality solutions combining all of the era's current fads. Basically, it manufactures cars (read around the fluff).

Hexagon AB, a global leader in digital reality solutions combining sensor, software and autonomous technologies, today announced a 100 MUSD investment in Divergent Technologies Inc., a pioneer of green manufacturing technologies with the first modular digital factory for the automotive industry.

Divergent has developed an alternative production process to traditional vehicle manufacturing called DAPS® (Divergent Adaptive Production System) that addresses economic and environmental challenges head-on. DAPS is a fully integrated software and hardware solution, creating a complete modular digital factory for complex structures. The patented process combines AI-optimised generative design software, additive manufacturing (3D printing) and automated assembly to build lightweight automotive parts and frames.

Figure 9 – Hexagon Press Release – 16 December 2022[7]

It appears that earlier in 2022, the Greenbridge Hexagon-insiders slush fund made its own investment in Divergent Technologies and Czinger, Divergent's founder's supercar company.

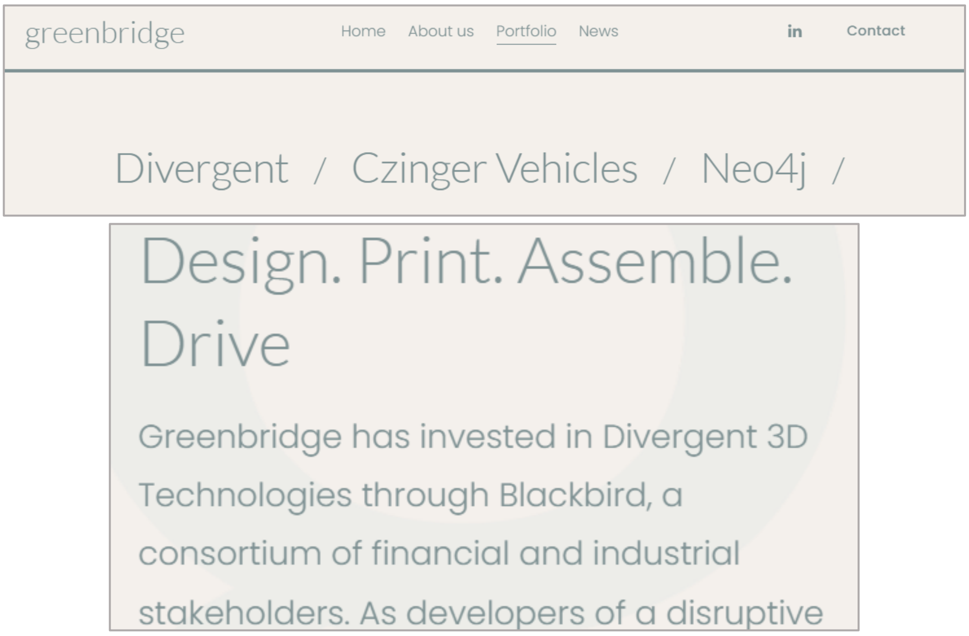

Figure 10 – Greenbridge website – 16 July 2023[8]

[7] https://hexagon.com/company/newsroom/press-releases/2022/hexagon-invests-100-musd-in-autonomous-and-sustainable-manufacturing-through-divergent
[8] https://www.greenbridge.lu/portfolio

It was reported that Divergent's pre-Hexagon valuation was approximately $1b. Founder Kevin Czinger confirmed this in an interview with Bloomberg after Divergent's $160m capital round in April 2022.

> (Bloomberg) -- Divergent Technologies Inc., a startup that makes a digital production system for designing and building cars, raised $160 million to scale operations and roll out its technology to factories in Europe and the U.S.

> The deal brings the company's valuation to over $1 billion, founder and Chief Executive Officer Kevin Czinger said in an interview.

Figure 11 – Divergent Is Valued at Over $1 Billion in Hedosophia-Led Funding[9]

In classic Hexagon fashion: no details of the transaction, Divergent's financials, or even the percetage of Hexagon's acquired interest in Divergent were made public.

What we do know is that after Hexagon management independently invested in Divergent through Greenbridge, the same management team thought it would be clever to invest in Divergent again with shareholder funds. Management have either:

- Double dipped in Divergent by taking personal stakes in the business ahead of stakeholder interests, and
- Commited an act of self enrichment through undisclosed related party transcations between Hexagon and Divergent.

To Viceroy, **this constitutes fraud**, which is similarly defined across IFRS countries as:

> 12. For purposes of the ISAs (UK), the following terms have the meanings attributed below:
>
> (a) Fraud – An intentional act by one or more individuals among management, those charged with governance, employees, or third parties, involving the use of deception to obtain an unjust or illegal advantage.

Figure 12 – Divergent Is Valued at Over $1 Billion in Hedosophia-Led Funding[10]

It's not even well disguised. The transaction was not conducted at arm's length. The related party nature of the transaction was not disclosed. Manaement have deceptively gained an unfair advantage at the expense of shareholders. It is a major conflict of interest on the part of management and a serious breach of shareholder trust.

How many others have there been? As Viceroy's experience suggests, company's that conduct these type of undisclosed transactions have more skeletons in the closet.

Greenbridge have made hundreds of millions of Euros of other investments. So have Schörling and Rollén's other investment vehicles. We look forward to management's full disclosure of all related party transactions and conflicts of interest.

We have provided details of these transactions to the financial regulator ahead of publication of this report.

The Chairman of Hexagon, Gun Nilsson, must have been aware of these undisclosed related party transactions given that she was the President and CEO of Schörling's investment vehicle, Melker Schörling AB, who is the second largest shareholder of Greenbridge after former Hexagon CEO, Ola Rollén.

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[9] https://finance.yahoo.com/news/divergent-valued-over-1-billion-180359851.html
[10] https://www.frc.org.uk/getattachment/e48499f2-b69b-4f45-8bef-762583eab1cd/ISA-(UK)-240-Final.pdf

Gun Nilsson – Chairman. Hypocrite.

It's no secret that Gun Nilsson, Hexagon's former Chair and current board member, represented the interests of Schörling in Hexagon. She was the president of Schörling's investment vehicle, Melker Schörling AB. She also presumably represents Schörling's interests as a board member in Hexagon spinoff clone: Hexpol AB.

> **Gun Nilsson**
> Born in 1955
> Member of the Board since 2008
> Chair of the Board since 2017
> Chair of the Remuneration Committee and Member of the Audit Committee
> *Education:* B.Sc. (Economics)
> *Work experience:* President of Melker Schörling AB, CFO of IP-Only Group, Sanitec Group and Nobia Group, CEO of Gambro Holding AB, Deputy CEO and CFO of Duni AB
> *Other assignments:* Board Member of Hexpol AB, AAK AB, Absolent Air Care Group AB, Bonnier Group AB and Einar Mattsson AB, Chair of The Swedish Corporate Governance Board

Figure 13 – Hexagon 2022 Annual Report

Alongside her roles representing Schörling's corporate dictatorships, **Gun Nilsson is also the Chair of the Swedish Corporate Governance Board**, whose role is defined on its website as to "ensure that companies that are ***not managed by their owners*** are run with the owner's best interests at heart". Ironic.

> The purpose of corporate governance is to ensure that companies that are not managed by their owners are run with the owners' best interests at heart.

Figure 14 – Extract – Swedish Corporate Governance Board website[11]

The Swedish Corporate Governance Board sets the Swedish Corporate Governance Code ("the Code") in a self-regulating market, as an alternative to legislation[12]. As below, the intention is to complement legislation "by placing higher demands on companies" in relation to governance, where deviation is allowed so long as explanations are provided.

> The Act specifies which governance bodies are to exist in a company, the tasks of each body and the responsibilities of the people in each of these positions. The Code complements the Act by placing higher demands on companies regarding certain matters, while simultaneously allowing them to deviate from rules in individual cases if it is deemed that this will lead to better corporate governance, ("comply or explain").

Figure 15 – Extract – Swedish Corporate Governance Code

The Code self proclaims, without any evidence, that "Swedish society take a positive view of major shareholders taking particular responsibility for companies by using seats on board of directors to actively influence governance". This is gaslighting. In our experience in reporting on European entities: major owners have always been the root of failures and frauds.

> Swedish society takes a positive view of major shareholders taking particular responsibility for companies by using seats on boards of directors to actively influence governance. At the same time, major holdings in companies must not be misused to the detriment of the company or the other shareholders. The Companies Act therefore contains a number of provisions which offer protection to minority shareholders, such as requiring qualified majorities for a range of decisions at shareholders' meetings.

Figure 16 – Extract – Swedish Corporate Governance Code

[11] https://www.bolagsstyrning.se/about-the-board/about-corporate-governance__3713
[12] To be clear, Viceroy also do not believe governance should be legislated.

We would like Gun Nilsson to explain the following of Hexagon's deviations from the Swedish Corporate Governance Code. These deviations are not disclosed or explained in Hexagon's governance report.

In our opinion: the Swedish Corporate Governance Board does a disservice to the Swedish investor. The entire Code simply accepts the fact that Governance is biased in Sweden and limited protections are afforded to minority shareholders.

The code emphasizes self-regulation where it appears even its own board members do not self-regulate.

Director Independence

The Code stipulates that a majority of the members of the board of directors, and at least two members must be independent of the company's majority shareholder (Schörling).

> The Code stipulates that no more than one of the directors elected by the shareholders' meeting may be on the executive management team of the company or one of its subsidiaries. Normally, this place is taken by the chief executive officer. However, it is also common that no member of the executive management is a member of the board.
>
> Hence boards of Swedish listed companies are composed entirely or predominantly of non-executive directors. The Code also states that a majority of the members of the board are to be independent of the company and its management. At least two members must also be independent of the company's major shareholders,[3] which means that it

Figure 17 – Extract – Swedish Corporate Governance Code

We note the following:

- John Brandon – Was simultaneously elected to the board of Securitas AB and Hexagon in 2017, both companies in which Schörling has outsized interests.
- Olla Rollén – Is noted by Hexagon as being independent of major shareholders. This is objectively false given Rollén and Schörling's interests in Greenbridge.
- Greenbridge – appears to encompass financial interests of Hexagon's senior management, undisclosed related party distributors, and directors. We were unable to identify many of Greenbridge shareholders.

We ask Hexagon to please clarify which of its directors are independent of major shareholders.

We ask management to clarify and correct statements as to the financial relationships between management, directors, and major shareholders.

The Audit Committee

The Code notes that the majority of the audit committee's members are to be independent of the company and its executive management.

> 7.2 If the board has established an audit committee, the majority of the committee's members are to be independent in relation to the company and its executive management. At least one of the members who is independent in relation to the company and its executive management is also to be independent in relation to the company's major shareholders.[18]

Figure 18 – Extract – Swedish Corporate Governance Code

Hexagon's audit committee is currently comprised as follows:

Board Member[1]	Elected	Independent	Audit Committee
Gun Nilsson	2008	No[2]	⊙
John Brandon	2017	Yes	
Ulrika Francke	2010	Yes	⊙
Henrik Henriksson	2017	Yes	
Erik Huggers	2021	Yes	
Ola Rollén	2000	No[3]	
Märta Schörling Andreen	2017	No[2]	
Sofia Schörling Högberg	2017	No[2]	⊙
Patrick Söderlund	2020	Yes	
Brett Watson	2021	Yes	

Figure 19 – Hexagon 2022 Annual Report[13]

- Gun Nilsson was the president and CEO of Melker Schörling's investment vehicle until 2022. Hexagon is substantially controlled by Melker Schörling through his investment vehicle.
- Sofia Schörling Högberg is both an employee and apparent beneficiary of Melker Schörling's investment vehicle, which substantially controls the Hexagon.
- Ulrika Francke declined re-election to Hexagon's board.
- Melker Schörling AB still actively invests, alongside Hexagon management, in Greenbridge.

Please advise which of the audit committee's members are independent in relation to the company and its executive management?

Hexagon is also required under Chapter 8 of the Swedish Companies Act to have at least one member of the audit committee with accounting and audit competence.

> [18] Provisions regarding the establishment of an audit committee and the tasks of an audit committee are found in chapter 8, sections 49 a-b of the Companies Act (2005:551). Chapter 8, section 49 a of the Companies Act states that the members of the committee may not be employed by the company, and at least one member must have accounting or auditing skills. For assessment of independence, see 4.4 and 4.5.

Figure 20 – Extract – Swedish Corporate Governance Code[14]

We note that none of the audit committee appears to have any chartered accounting qualifications or background in accounting or audit.

Please advise which member of the audit committee, and moreover the board, possesses accounting or audit competence.
Hexagon has engaged in ~300 M&A transactions over the prior 25 years. Do you believe the audit committee's accounting skills are sufficiently appropriate to adequately conduct its duty?

---

[13] https://vp208.alertir.com/afw/files/press/hexagon/202303301517-1.pdf
[14] The correct translation of this code per the Swedish Companies Act appears to be "accounting or auditing competence", not "skills".

The Remuneration Committee

We're not going to waffle on about how much Hexagon should pay its executives. Hexagon's management bonus incentives appear to incentivize negative behavior. This falls under the guise of corporate governance and should be scrutinized more heavily by shareholders.

To preface: best practice for remuneration committee composition and reporting is now set by the Swedish Stock Market Self Regulating Committee, which has taken it over from the Swedish Corporate Governance Board. We still see this is a failure and hypocrisy on the part of Gun Nilsson.

The general meeting's decisions on incentive programmes are to include all significant terms and conditions for the programme.

Figure 21 – Rules on Remuneration of the Board and Executive Management and on Incentive Programmes[15]

We note that best practice dictates that all significant terms and conditions for incentive programmes should be disclosed for shareholder consideration. Per Hexagon's 2020-2023 Share Option Incentive plan, here are Hexagon management's conditions for obtaining a bonus:

Performance condition
Allocated performance awards entitle, with reservation for any reduction in the number of shares in accordance with the terms of Share Programme 2020/2023, to the receipt of Series B shares in the company provided that the performance condition related to the development of Hexagon's earnings per share[1] compared to the target level set by the Board of Directors during the measurement period 1 January 2020 until 31 December 2023 are fulfilled, where the last financial year during the measurement period is compared with the financial year preceding the measurement period. The Board of Directors intends to present the fulfillment of the performance-based condition in the annual report for the financial year 2023.

Figure 22- Performance based long term incentive plan proposal extract – 2020[16]

The criteria management must meet at Hexagon, an aggressive acquirer, is an earnings per share target. Given that Hexagon acquires mature revenues with earnings at 0.5x – 3x and trades at 6x revenues, this seems like the easiest incentive in the world, and does nothing to promote long-term quality. We note that subsequent share-based incentive proposals have identical performance criteria.

Section 6 of this report will also cover margin-magic wizardry conjured up by Hexagon management to artificially (and temporarily) increase earnings and (presumably) help meet performance targets.

At the end of the financial periods, the Remuneration report consistently informs investors that management have met their predetermined targets and were awarded full bonuses. It never actually states what the earnings per share target actually is (to our knowledge).

It seems disingenuous to not disclose this information. It is probably less disingenuous than the incentive plan. Indeed, this was noted very publicly in the AGM by the Norwegian Government Pension Fund's investment manager who voted against Hexagon's remuneration policy.

At the Hexagon AB annual general meeting, Folketrygdfondet, manager of the Government Pension Fund Norway, voted against item 14 for the following reasons:

Item 14: Guidelines for remuneration to senior executives

Rationale:
Folketrygdfondet's decision to vote against the executive remuneration policy is based on a cumulative assessment. We note the significant and unexplained increase in CEO compensation, the absence of detailed information on performance criteria for short-term bonus payments, and a long-term incentive program based on absolute, rather than relative performance.

Figure 23- Performance based long term incentive plan proposal extract – 2020 [17]

[15] https://regelkommitten.se/remuneration-rules/current-rules__161
[16] https://vp208.alertir.com/sites/default/files/agm/egm2020_the_boards_proposal_on_implementation_of_share_programme_2020_2023.pdf
[17] https://www.folketrygdfondet.no/en/reporting/shareholder-meetings/hexagon-ab-2

3. Audit(or) Issues

EY had been Hexagon's auditors since the 90s. The Hexagon relationship primarily had been handled by two principal auditors at EY over this time: Hamish Mabon (2006-12) and then Rickard Andersson (2013-19).

Both Mabon and Andersson are still at EY conducting audits of public companies.

Under Swedish law, the lead auditor needs to change every seventh year (the firm can remain the same). Thus, in 2020 EY was reappointed as the external auditor but with a new lead auditor: Andreas Troberg, who is still at EY.

In 2021, out of the blue, the Company changed to PWC after more than two decades.

Major events in the world of accounting took place during this time, and we believe that EY did not willingly give up one of their largest Nordic clients, but were instead replaced for being overly nosey.

In 2018, the IASB adopted several amendments to the Conceptual Framework to Financial Reporting which effectively underly the development of IFRS standards. These amendments led to significant changes in, among other things, IFRS 3 (Business Combinations) adopted in 2020: the year of Troberg's appointment as external auditor of Hexagon.

IFRS 3 – Business Combinations

The major change to IFRS 3 and how businesses account for business combinations under the new conceptual framework required companies to better define business combinations from asset acquisitions. IFRS 3 (Revised) introduced enhanced disclosure requirements regarding the nature and financial effects of business combinations. These disclosures aim to provide users of financial statements with information to evaluate the financial impact and risks associated with any business combinations.

For instance:

- Acquiring a going concern manufacturing business with retained staff, generally speaking is a business combination, and can be subject to goodwill.
- Acquiring a manufacturing business subject to insolvency proceedings whose only discernable assets are manufacturing equipment and do not have staff is, generally speaking, an asset purchase. The transaction cannot accrue goodwill and assets will be subject to depreciation (or amortization in the event of intangibles)

This is potentially problematic for Hexagon who:

- Acquires a significant number of businesses, notably for their assets, from insolvency proceedings.
- Acquires a significant number of distributors, whose only discernable assets appear to be customer relationships, and do not take on their staff.

We suspect that in retrospect, an earlier introduction of IFRS 3 amendments would have created sweeping differences on Hexagon's balance sheet as:

- Acquired distributor relationships would be subject to amortization, and not held indefinitely on the balance sheet as unimpaired goodwill.
- Amortization expenses would have materially impacted earnings (which would, frankly, bring Hexagon in line or below comps).

We believe further scrutiny of Hexagon's acquisition of distributors and insolvent entities was a subject of concern for EY in 2020. It was not raised by PWC.

IFRS 15 – Revenue Recognition

Broadly speaking, the matter of Revenue Recognition changes under IFRS 15 have been broadly reported. We will not re-report the issues here, but include the link to EY's own IFRS 15 changes and adoption:

https://www.ey.com/en_gl/ifrs-technical-resources/a-closer-look-at-ifrs-15-the-revenue-recognition-standard-october-2020

It is important to recognize subtle changes to the recognition of licensed revenues, and the distinction between right-to-access (**R2A**) licenses and right-to-use (**R2U**) licenses.

From a short-term perspective, R2U revenues are preferable as the users are buying stand-alone software and use it in that form for the licensing period. Revenue can effectively be booked upfront. Theoretically, R2U revenues can be brought forward in many different kinds of ways (i.e. discounts for early renewals).

R2A assets provides customers with the most recent form of IP during the license period. Think SaaS subscription software. This revenue must be booked over the period of the contract.

Hexagon disclosures do not provide enough detail to substantiate a claim that R2U assets inflate revenues. In fact, most company disclosures do not. But this is a key audit matter and should be subject to further scrutiny. We believe that it is plausible that EY probed this matter more thoroughly.

Disclosures

As is tradition in the Swedish dual class share structure, minority shareholders are not privy to any actual useful information for analysis, and have no real course of action to correct management behavior.

Hexagon's financial statements are a perfect example of the lazy manner in which financial information about Hexagon's business operations is conveyed to shareholders. They are atrocious.

Hexagon is a roll-up. It makes hundreds of acquisitions.
The last time Hexagon disclosed how much revenue its acquisitions in a single year generated was in 2010.

Since then, investors have been treated to hilariously inconsistent financial data sets of cherry-picked acquisitions. Hexagon has never tracked or made an attempt to follow up on the status and financial health of any of its acquisitions over time, although these are material to the financial status of the Company. For a company that has indulged in such an aggressive acquisition strategy for over two decades and that has goodwill making up almost 60% of the company's assets in 2022, this beggars belief.

Major acquisitions like Leica or Intergraph report top-line and earnings numbers, but the actual performance of these entities is not distinguishable from the numerous acquisitions that Hexagon dissolve and blend into the Leica and Intergraph umbrellas. The nature and size of these transactions has a material impact on Hexagon's revenue and margins.

In 2022, Hexagon made 11 acquisitions. Outside of aggregate balance sheet data for these asset-light businesses (which therefore provide no information to shareholders), Hexagon only reported the top line sales of ETQ. Management have not even aggregated the revenue or earnings impact acquisitions have made, in aggregate, to its financials since the early 00's.

It is ludicrous that this issue has not been raised in the past, but we raise it now:

In our view, Hexagon's business combination disclosures (IFRS 59-64) do not give investors a fair representation as to their financial statement impact.

These details are material (especially in aggregate), and case studies are detailed in **Section 5** of this report.

The CFO(s)

Hexagon has made, by our count, around 200 acquisitions totaling more than €11b since 2001. It's financial statements and business combinations are extraordinarily complex, as are the accounting standards it must follow to remain compliant.

We note that Hexagon has not had a chartered accountant CFO since at least 2001. This is a massive red flag for any public company.

David Mills – 2023 – Current

David Mills has been Hexagon's CFO as of 1 July 2023. He is a Hexagon lifer, having joined the business through the acquisition of Brown & Sharpe in 2001. Throughout his tenure he has not worked with a chartered accountant CFO.

David holds a Chartered Management Accountant certification, which we do not believe is appropriate for the CFO responsible for the financial account presentation of a €30b international conglomerate.

Robert Belkic – 2012 – 2023

Robert Belkic is an investor in Greenbridge. We believe an undisclosed self-enriching relationship with Greenbridge constitutes fraud.

Other than this, Belkic also does not appear to hold any charted accountant certification. Belkic's bachelor's degree similarly does not show a major in accounting.

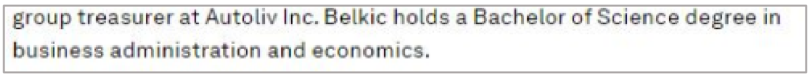
group treasurer at Autoliv Inc. Belkic holds a Bachelor of Science degree in business administration and economics.

Figure 24 – Hexagon Leadership website - 2022[18]

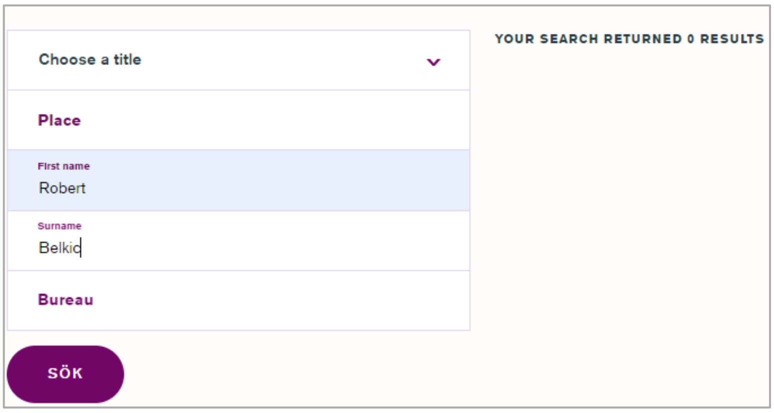

Figure 25 – FAR Chartered Member Search[19]

Håkan Halén – 2001 – 2012

Halén, like Belkic, appears to have no chartered accounting certification.

We believe Hexagon's CFO(s) are not sufficiently qualified to present financial accounts to its shareholders.

We would like to disclaim that you don't have to be a Chartered Accountant to understand what a related party transaction is. It's self-explanatory.

[18] https://web.archive.org/web/20221126113228/https://hexagon.com/company/leadership#leadership-listing_leadership%20type%20and%20division%20facet=Executive%20Management
[19] https://www.far.se/medlem/sok-far-medlem/

4. Value Destruction – Debunking Organic Growth

Viceroy has sunk significant time and money obtaining public records, including financial statements, of Hexagon's numerous acquisitions across the globe. These financials do not paint the picture of the thriving innovator that management likes to portray. Viceroy's analysis of Hexagon's acquisitions suggests that organic growth is vastly overstated.

On a pro-rata basis, we believe that Hexagon has only enjoyed ~€460m of organic growth since 1998 and revenue growth has principally been fueled by acquisitions.

Hexagon Organic Growth Analysis	Total
Net acquisition consideration	**11,348**
Prior period revenue	468
Acquired revenue	4,452
Disposed revenue	(220)
Revenue (estimate)	**4,700**
Revenue (reported)	5,161
Delta (organic growth)	**460**
Revenue acquisition multiple	**2.55**

Figure 26 – Viceroy Analysis

Key Takeaways & Observations

Viceroy estimates that Hexagon has acquired ~€4.7b of its 2022 revenues since 1998. This leaves ~€460m of organic growth, not considering foreign currency impacts. This is entirely inconsistent with the high single-digit average annual organic growth that is reported (or, more precisely, misreported) by Hexagon over the period which would have amounted to billions of euros of non-acquisition revenue growth.

This distorts the true financial performance of the company and results in false perceptions of the company's growth potential.

Hexagon appears to intentionally muddy the line between organic and acquisition growth. We believe significant portions of reported "organic" growth is, in fact, mischaracterized acquisition growth. We would note as follows:

- Dozens of acquisitions, including many distributors, are immediately dissolved and merged into local Hexagon umbrella companies. The revenues of these acquisitions would be indistinguishable from organic growth.
- We believe Hexagon takes advantage of the intra-period nature of acquisitions to overstate organic growth. Pro-rata financials are not made available to investors, despite the materiality of acquisitions in aggregate to financial results.
  - Revenue from acquisitions acquired in the middle of the financial year will not have the full year revenue impact in the year of acquisition.
  - In the period subsequent to the acquisition the full year's revenue impact would be registered and the difference to the prior period partial revenue would be marked as organic revenue growth.
- Many well-documented acquisition targets show enormous revenue & receivable jumps in the acquisition year on the basis of differences of accounting policies and/or accounting periods. We believe contracts are brought forward on many acquisitions. This growth may recorded as "organic".

Viceroy has pulled hundreds of Hexagon acquired subsidiary filings from local corporate registries across the globe.

- Analysis of these subsidiary filings supports the view that revenue does not organically grow. In most well-documented cases, revenues are subject to decline. This supports the thesis that organic growth is limited/flat.
- Flailing subsidiaries are sometimes rebranded and will be blended into new Hexagon acquisitions. This makes assessment around goodwill impairment extremely difficult, and acquisitions are indistinguishable from one another.

These details are material (especially in aggregate), and case studies are detailed in **Section 5** of this report.

1998 – 2010 – “The SEK Era” forming bad habits

This period commenced just two years before the Schörling / Rollén management era and incorporated a large part of it. During the period Hexagon still reported in SEK. It’s notable that, despite the lack of accounting guidelines and developments of IFRS around disclosures, the 1998 accounts gave vastly more details into the acquisitions made by management than they do now.

Despite claims by management to the contrary, we can see that Hexagon was not vastly different in the 90’s and 00’s than it is now and that indulged in the same habits back then as it does today. During this period Hexagon aggressively acquired mostly mature, cheap revenues in niche manufacturing, engineering and agricultural sectors. To the management’s credit: earnings have improved since then with deployment of aggressive accounting measures.

Hexagon’s top-brass proclaimed this restructuring was paying off over the last 5 years of the 00’s, reporting enormous organic growth numbers. Our analysis of Hexagon’s acquisitions suggests these numbers are false.

From 1998 to 2010, Hexagon

- Acquired SEK 19.7b in revenues.
- Disposed SEK 1.9b in revenues.
- It commenced the period with SEK 4.2b in revenues.

Far from posing great organic growth figures, Viceroy’s analysis suggests that annualized organic growth had actually gone into reverse, posting a negative SEK 7.8b over this period. We note the following:

- Subsidiary data across this period is substantially complete. It is also generally easy to obtain European financial data from local corporate registries.
- The Intergraph acquisition in 2010 overstates this figure by SEK 4b – 5b. This volatility will self-correct in future period analysis.

Organic Growth Analysis	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	98 - '10	(EUR)
Acquisition consideration				1,893	231	8	916	8,757	204	4,878	874	71	15,804		
less: cash acquired				(109)	(12)	1	(58)	(38)	(6)	(1,101)	(73)	-	(741)		
Net acquisition consideration	**442**	**367**	**190**	**1,784**	**219**	**9**	**858**	**8,719**	**198**	**3,777**	**801**	**71**	**15,063**	**32,498**	**3,606**
		-	-	-	-	-	-	-	-	-	-	-	-		
Prior period revenue	4,218	4,946	4,667	5,099	6,204	6,997	7,103	8,256	9,637	13,469	14,587	14,479	11,811	4,218	468
Acquired revenue	821	120	1,100	3,265	510	20	375	4,641	220	2,143	413	68	6,003	19,700	2,186
Disposed revenue			(1,980)											(1,980)	(220)
Revenue (estimate)	**5,039**	**5,066**	**3,787**	**8,364**	**6,714**	**7,017**	**7,478**	**12,897**	**9,857**	**15,612**	**15,000**	**14,547**	**17,814**	**21,938**	**2,434**
Revenue (reported)	4,946	4,667	5,099	6,204	6,997	7,103	8,256	9,637	13,469	14,587	14,479	11,811	14,096	14,096	1,564
Delta (organic growth)	**(93)**	**(399)**	**1,312**	**(2,160)**	**283**	**86**	**778**	**(3,260)**	**3,612**	**(1,025)**	**(521)**	**(2,736)**	**(3,718)**	**(7,842)**	**(870)**
Revenue acquisition multiple	**0.5**	**3.1**	**0.2**	**0.5**	**0.4**	**0.5**	**2.3**	**1.9**	**0.9**	**1.8**	**1.9**	**1.0**	**2.5**	**1.65**	**1.65**
Reported organic growth	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*11%*	*12%*	*12%*	*15%*	*7%*	*-19%*	*17%*		

Figure 27 – Viceroy Analysis

Summaries of all acquisitions made and their revenue impact for this period can be found in **Annexure 1.**

2011 – 2017 – "The Early EUR Era" indulging in bad habits

Management moved to EUR reporting in 2011. Throughout this period, Hexagon disclosures have become increasingly poor. We have spent hundreds of hours trawling corporate registries for local subsidiary filings but disclosures by management are extremely limited. There are many gaps which lead to growth being overstated over this period.

From 2011 – 2017, Hexagon

- Acquired €700m in revenues.
- It commenced the period with €1.4b in revenues.
- 2017 annual revenues amounted to €3.44b

Based on a superficial analysis, the annualized organic growth of Hexagon during the period seemed to be robust, coming in the region of €1.2b over the period. However, looks can be deceptive and we believe that this figure is substantially overstated (read further for what we believe is the true figure). We note the following important caveats to the headline organic growth figure:

- Approximately €500m - €600m of growth is attributed to the timing of the Intergraph acquisition in 2010.
- Hexagon's acquisition disclosures for the period are increasingly opaque. Management insists that most acquisitions were not individually material, and so did not report financial data. However, we strongly question this view of management and their motives for leaving this data out. in aggregate, we believe that these acquisitions were in fact material. As such:
  - Where possible, Viceroy has obtained local filings of acquired subsidiaries to fill the gaps.
  - We note that dozens of acquisitions over this period are not included in "Acquired revenue", thus materially overstating the estimated Delta (acquired growth). See annexures for more detail.
- Hexagon benefitted immensely from currency tailwinds in 2015. These smooth out throughout the period
- The conversion from SEK to EUR for pre 2011 accounts will create a rounding error of "prior period revenue" and skews organic growth estimates upwards. "'11- '17" and "Total" columns will not balance.
  - We calculate the margin of error at around 3% of reported 2017 top line figures. Figures subject to margin of error are highlighted blue. These figures do not materially impact end figures.

Viceroy's analysis suggests that Hexagon's organic growth remains largely overstated. Our analysis shows Hexagon accumulated organic growth amounts to only €276m between 1998 and 2017 and even <u>this is a blue-sky scenario.</u>

Hexagon Organic Growth Anal	'98-'10	2011	2012	2013	2014	2015	2016	2017	'11-'17	'98- '17
Acquisition consideration		111	65	88	649	245	208	954		
less: cash acquired		(4)	(1)	(11)	(50)	(4)	(9)	(38)		
Net acquisition consideration	**3,606**	**107**	**64**	**77**	**598**	**242**	**199**	**916**	**2,203**	**5,809**
Prior period revenue	468	1,481	2,169	2,380	2,429	2,622	3,043	3,149	1,481	468
Acquired revenue	2,186	11	34	24	194	83	116	276	738	2,923
Disposed revenue	(220)								-	(220)
Revenue (estimate)	**2,434**	**1,492**	**2,203**	**2,404**	**2,623**	**2,705**	**3,159**	**3,425**	**2,219**	**3,172**
Revenue (reported)	1,564	2,169	2,380	2,429	2,622	3,043	3,149	3,448	3,448	3,448
Delta (organic growth)	**(870)**	**677**	**177**	**25**	**(0)**	**338**	**(10)**	**23**	**1,229**	**276**
Revenue acquisition multiple	**1.65**	**9.7**	**1.9**	**3.2**	**3.1**	**2.9**	**1.7**	**3.3**	**2.99**	**1.99**
Reported organic growth		*13%*	*5%*	*5%*	*7%*	*5%*	*2%*	*5%*		

Figure 28 – Viceroy Analysis

Summaries of all acquisitions made and their revenue impact for this period can be found in **<u>Annexure 2.</u>**

The great organic growth story touted by management proves to be nothing of the sort. Organic growth since 1998 has been paltry and to claim otherwise is sheer misrepresentation.

2018 – Now – "The Modern Era" – paying for bad habits

By this stage, we believe that Hexagon's history of poor disclosures and aggressive accounting has become problematic for management, who may well now be worried about their prior claims and hype catching up with them. Naturally, management decided that the best option to deal with this was to double down and become even more opaque.

Hexagon has made almost no disclosures at all concerning the financial history or substance of roughly €5.5 billion of acquisitions that took place over the past 5 years. This is worrying, to say the least.

For instance: of 11 acquisitions made in 2022 totaling €1.2 5 billion, Hexagon has only provided the *revenue* of a single acquisition: ETQ. This is pathetic, and intentionally obstructive of any sort of proper analysis.

Given that we have a vast period from which to determine a revenue acquisition multiple, Viceroy has derived the revenue from Hexagon's 2018-2022 acquisitions backwards from acquisition spend. This is also consistent with the very few acquisitions we have documented for this period. We note the following:

- Viceroy derive revenues from acquisitions from acquisition consideration, using a multiple of 3x – 4x (consideration / revenue)
  - This is an extremely generous multiple in support of purported organic growth. The average price/revenue multiple in the preceding 20 years is 2x. From 2011 to 2017, it is ~3x.
  - We have applied a 4x multiple in both 2021 and 2022 for outsized, higher multiple purchases of Infor's EMA and ETQ.
  - Given this coincides with market downturns throughout Covid: this is extremely generous.
  - We are happy to make amendments as necessary if Hexagon disclose actual financial data for acquisitions during this period.
- We note that the below delta is not adjusted for currency changes, which provided a net growth tailwind for the period.

Our analysis suggests annualized organic growth amounts to €184m over this period.

Hexagon Organic Growth Analysis	'98-'17	2018	2019	2020	2021	2022	'18-'22	Total
Acquisition consideration		555	394	860	2,589	1,252		
less: cash acquired		(10)	(38)	(35)	(5)	(22)		
Net acquisition consideration	**5,809**	**545**	**356**	**825**	**2,583**	**1,230**	**5,539**	**11,348**
Prior period revenue	468	3,448	3,761	3,908	3,764	4,341	3,448	468
Acquired revenue	2,923	182	119	275	646	308	1,529	4,452
Disposed revenue	(220)	-	-	-	-	-	-	(220)
Revenue (estimate)	**3,172**	**3,630**	**3,879**	**4,183**	**4,410**	**4,649**	**4,977**	**4,700**
Revenue (reported)	3,448	3,761	3,908	3,764	4,341	5,161	5,161	5,161
Delta (organic growth)	**276**	**131**	**28**	**(418)**	**(69)**	**512**	**184**	**460**
Revenue acquisition multiple	**1.99**	**3.0**	**3.0**	**3.0**	**4.0**	**4.0**	**3.62**	**2.55**
Reported organic growth		*8%*	*-1%*	*-4%*	*12%*	*8%*		

Figure 29 – Viceroy Analysis

Summaries of all acquisitions made and their revenue impact for this period can be found in **Annexure 3.**

5. The Hexagon M.O. – Acquisitions, Acquisitions, Acquisitions

"From 2000 to date, Hexagon completed more than 180 acquisitions"

From the 2022 Annual Report

In fact, our records show that Hexagon has made more than 200 acquisitions since 2000.

Contrary to the claims of management, our findings suggest that Hexagon has never really been able to grow organically. All its growth has been via acquisitions, and we suspect that management is incentivized to this end. This is probably why Hexagon has carried out more than 180 acquisitions since 2000. Growth through acquisitions is very clearly Hexagon's modus operandi (along with various aggressive accounting methods we describe in Section 5 below) and we examine its approach to acquisitions in this section.

Acquirer of Distributors

Hexagon is a serial acquirer of distributors, servicing agents and third-party software providers. It appears to acquire distributors in its sectors generally, not just distributors of Hexagon equipment. It is difficult to see how any of these acquisitions has led to a large amount of organic growth. Well documented cases appear to be acquisitions of stable and mature customer relationships.

It appears as though critics may have probed this habit in around 2016, when Hexagon begins using the term "supplier" in an indistinguishable fashion in its business description of all acquisitions, regardless of whether they are a distributor or hold any operational IP assets.

Year	Distributors acquired
2001	3
2002	1
2006	3
2007	8
2008	5
2009	1
2011	4
2012	4
2013	5
2015	3
2016	2
2017	4
2018	3
2019	1
2020	3
2021	1
2022	5
Total	**56**

Figure 30 – Viceroy Analysis

We generally perceive the acquisition of distributors as a red flag. As we will detail below: the acquisition of contract revenue streams leaves plenty of room for massaging numbers. This includes bringing forward revenues. We touch on this below.

Acquirer of Acquirers

As far as the analysis of roll-ups is concerned: analysis of individual subsidiaries themselves is difficult as they are also serial acquirers.

We note that most of Hexagon's large acquisitions, from Brown & Sharpe in 2001 to the more recent acquisitions of Intergraph, Leica and Qognify, were also serial acquirers. These acquisitions lead to complex Goodwill holdings with multiple layers of analysis required to prepare a meaningful analysis.

The lack of earnings consistency makes analysis extremely difficult.

Acquire to Dissolve

Vast numbers of Hexagon acquisitions are immediately dissolved and merged into existing Hexagon umbrella companies. At this point, we don't understand how Hexagon can then make the distinction between acquired revenues and organic revenues, as these revenues would appear in the financials of Hexagon's existing business immediately post-acquisition.

This merger method is exceedingly prevalent in the acquisition of distributors and in the acquisition of distressed entities.

Below, we have pulled together case studies of this activity from a well-documented jurisdiction: Germany. Investors can replicate these searches on the German Unternehmensregister for free[20].

Germany - 2015 - 2022 Acquisitions dissolved upon acquisition	Revenues
FASys Industrie-EDV-Systeme GmbH	11.6
Licom Systems GmbH	16.0
ETALON AG	24.0
AMendate GmbH	N/A
MECADAT AG	83.8
Apodius GmbH	N/A
CAMTECH GmbH & Co. KG	6.1
Total	**141.5**

Figure 31 – Viceroy Analysis

- *Purple flags denote distributors.*
- *Highlighted revenue cells are estimates derived from 30 receivable days (working capital efficiency), where subsidiary P&L figures are not available.*
- *Please see Annexures for greater detail.*

Only in Germany, and only in acquisitions from 2015: Hexagon has dissolved/blended an estimated €142m of acquired revenues into its own entities. These include scenarios where Hexagon has sought relief from reporting obligations in these subsidiaries, and note that financial results are represented in local Hexagon umbrella entities.

We reiterate that we do not have a complete view of transactions due to Hexagon's lack of transparency. We believe these are conservative estimates.

This modus operandi is common across all well-documented acquisition jurisdictions. Compiling them all would be a lengthy, tedious exercise, so do not take our word for it: conduct the searches yourselves.

We believe significant portions of "organic growth" are derived from acquisitions using this method.

We also question where there is goodwill associated with these transactions, how they can be properly assessed for impairment.

[20] https://www.unternehmensregister.de/ureg/

Trending down & Brought forward

Perhaps the most pertinent point to note is that a vast portion of well -documented Hexagon acquisitions show negative growth post-acquisition.

This happens for two main (not mutually exclusive) reasons:

- A large majority of acquisitions are of mature businesses with established revenue streams. In many cases, these businesses will become redundant if not for constant R&D spend. We believe Hexagon makes many non-growth acquisitions at the peak of asset earnings cycles, and rides these earnings through their useful lives, to ensure it can continue to show revenue growth.
- Many acquisitions show exploding revenues and receivables in the acquisition year. This is consistent with bringing forward future revenues. Accordingly, future periods represent a downward return to "normal" revenues.

We again note that we do not have all the available financial documents for every acquisition. Many jurisdictions simply do not allow access or do not require lodgment of private company financials. Per above, we also note that many acquisitions immediately stop reporting independent financials as they are blended into existing Hexagon umbrella companies.

We present the below case studies as a sample, which we believe is the most easily replicable by readers.

Case Study List	Year	Access to Financials
Immersal Oy	2022	Finland Corporate Registry
Inform EAM Business	2021	N/A
CAEfatigue	2020	UK Companies House
Etalon	2019	German Unternehmensregister
SpringSense	2019	French registry access required
Nextsense	2018	Austian Corporate Registry
Micro-Top	2016	Romanian Corporate Registry
Hostsure	2016	UK Companies House
Nestix Oy	2016	Finland Corporate Registry
Ohmtech	2015	Norwegian Corporate Registry

Immersal Oy – 2021

Finnish Spatial mapping and visual positioning tech.

Revenues fell from €381k in 2021 to €378k in 2022. Operating losses extended from €6k to €384k. Losses extended from €151k to €1.2m.

Tuloslaskelma

	01.01.2022 - 31.12.2022	01.01.2021 -31.12.2021
Liikevaihto	378 373,43	381 826,41
Materiaalit ja palvelut		
Aineet, tarvikkeet ja tavarat		
Ostot tilikauden aikana	-24 652,61	-1 350,75
Ulkopuoliset palvelut	-360 041,53	-4 815,59
Materiaalit ja palvelut yhteensä	-384 694,14	-6 166,34
Henkilöstökulut		
Palkat ja palkkiot	-366 000,41	-129 888,07
Henkilösivukulut	-77 820,45	-30 726,53
Eläkekulut	-64 461,99	-23 006,04
Muut henkilösivukulut	-13 358,46	-7 720,49
Henkilöstökulut yhteensä	-443 820,86	-160 614,60
Poistot ja arvonalentumiset		
Suunnitelman mukaiset poistot	-232 905,08	-180 306,02
Poistot ja arvonalentumiset yhteensä	-232 905,08	-180 306,02
Liiketoiminnan muut kulut	-518 542,30	-186 536,25
Liikevoitto (-tappio)	-1 201 588,95	-151 796,80

Figure 32 – Immersal Oy 2022 financial statements.

Inform EAM Business

Infor EAM business – "best in class" EAM solution. In reality, we believe EAM solutions are standardized to death.

Case-in-point: Hexagon's press release to acquire Infor's EAM business noted that they expected 2021 annual revenues of US$184m. In the subsequent annual report, it was revealed earnings for 2021 totaled only €150m. It missed this guidance in the same year by ~US$10m.

> The best-in-class, SaaS-based asset management solution, Infor EAM, is used to track assets, digitalise maintenance operations and enable customers in nearly any industry to reach optimum operational efficiency. Infor's EAM business is expected to generate 2021 revenues of 184 MUSD, of which over 70 per cent is recurring, with an adjusted operating margin of over 40

> From the date of consolidation (1 October), Infor's EAM business has contributed 38.1 MEUR of net sales in 2021. If the acquisition had taken place at the beginning of the year, the contribution to net sales would have been 150.9 MEUR. The contribution to the group operating margin has been accretive.

Figures 33 & 34 – Hexagon Press Release 1 Oct 2021[21] & Hexagon 2021 Annual report.

CAEfatigue

British mechanical fatigue simulation solution developer acquired in 2020. Revenues down over acquisition period:

An analysis of turnover by class of business is as follows:

	10 months to 31 December 2020 £	As restated 8 months to 29 February 2020 £
Software licensing	445,904	465,178

Figure 35 –CAEfatigue 2020 financial statements

We note that the period to 29 February 2020 was only 8 months, while the period to 30 December was 10 months (change of reporting periods in 2020). Given this, the annualized period-on-period revenue decline exceeds 20%.

Etalon

2019 acquisition of equipment calibration solutions. Financial accounts show a huge receivables jump in 2019. More consistent with bringing forward revenues. Looking forward to 2021, we can see receivables fall further. Revenues for the period to 2019 are not available.

	31.12.2019 EUR	31.12.2018 EUR
A. Anlagevermögen	596.316,34	322.905,32
I. Immaterielle Vermögensgegenstände	28.726,00	36.759,00
II. Sachanlagen	567.590,34	259.048,50
III. Finanzanlagen	0,00	27.097,82
B. Umlaufvermögen	3.390.844,10	1.886.239,91
I. Vorräte	1.391.561,66	1.230.118,95
II. Forderungen und sonstige Vermögensgegenstände	1.999.282,44	656.120,96

	4.693.190,41	**5.107.624,23**
II. Forderungen und sonstige Vermögensgegenstände	1.478.224,72	982.208,20
1. Forderungen aus Lieferungen und Leistungen	4.010.889,57	4.655.264,90
2. Forderungen gegen verbundene Unternehmen	188.596,36	288.070,58
3. Sonstige Vermögensgegenstände	**5.677.710,65**	**5.925.543,68**
III. Kassenbestand, Guthaben bei Kreditinstituten	1.186,77	956,52

Figures 36 & 37 – Etalon 2019 & 2021 Financial Statements

[21] https://hexagon.com/company/newsroom/press-releases/2021/hexagon-completes-acquisition-infors-eam

SpringSense

French “Software provider specializing in integrated solutions for maximizing workflow” acquired in 2018. It appears to be just a distributor. Revenue drops 28% from €6.5m in 2018 to €4.7m in 2021, after brief growth in 2019.

RUBRIQUES	France	Export	Net (N) 31/12/2019	Net (N-1) 31/12/2018
Ventes de marchandises	945 625	27 592	973 218	136 799
Production vendue de biens	37 289	1 122 319	1 159 609	1 109 500
Production vendue de services	4 517 120	840 407	5 357 527	5 297 341
Chiffres d'affaires nets	**5 500 035**	**1 990 318**	**7 490 353**	**6 543 640**

RUBRIQUES	France	Export	Net (N) 31/12/2021	Net (N-1) 31/12/2020
Ventes de marchandises				61 033
Production vendue de biens	312 718	12 664	325 382	116 072
Production vendue de services	3 960 564	458 213	4 418 777	4 764 129
Chiffres d'affaires nets	**4 273 282**	**470 877**	**4 744 160**	**4 941 234**

Figures 38 & 39 – SpringSense Revenue data 2018-2021

Nextsense

Austrian optical measurement solutions acquired in 2018. Revenue brought forward in the year of acquisition. Receivables skyrocket. Negative growth to 2020s.

	2018 €	2017 T€
1. Umsatzerlöse	**15.753.648,16**	**11.594,9**

	2020		2019	
	EUR	EUR	TEUR	TEUR
1. Umsatzerlöse		12.921.938,91		16.456

Figures 40 & 41 – Nextsense Revenue - 2018 & 2020 Financial Statements

Micro-Top

Romanian distributor acquired in 2016. Revenue falls off a cliff post-acquisition.

	Business figure (Turnover (CA) represents the total sales made (invoiced) during a fiscal year. The figure does not include the invoiced VAT.)	Net Profit (Net profit is the difference between the gross profit obtained by an economic entity and the related profit tax.)
2020	642 698	-167 657
2019	1 237 672	741 387
2018	1 123 364	1 354 395
2017	2 515 531	-160 024
2016	13 171 135	5 065 103
2015	9 292 106	1 390 815

Figure 42 – Micro-top Revenue & Net Profit - listafirme.ro extract

Hostsure

Irish cloud solutions for power & energy markets acquired in 2016. Revenues fall by 25% from acquisition level in 2019 after enjoying a brief period of growth. They have not recovered.

	Notes	2017 €	2016 €
Revenue	6	5,353,528	4,128,922

	Notes	2019 €	2018 €
Revenue		3,006,760	5,371,157

Figures 43 & 44 – Hostsure revenue 2016-2019 – Hostsure 2017 & 2019 financial statements

Nestix Oy

Finnish software developer with focus on steel manufacturing acquired in 2016. Revenues and earnings both materially fall on and after acquisition. As of 2022, revenues sit ~20% below acquisition levels. Earnings have similarly suffered.

	Financial year 2016	Financial year 2015
NET TURNOVER	3 014 875,33	3 803 520,27
Other operating income	0,00	38 066,00

	Tilikausi 2018	Tilikausi 2017
LIIKEVAIHTO	3 421 685,73	2 791 874,33

	Tilikausi 2020	Tilikausi 2019
LIIKEVAIHTO	3 037 377,41	3 786 579,77

	Tilikausi 2022	Tilikausi 2021
LIIKEVAIHTO	2 480 326,77	2 564 569,23

Figures 45, 46, 47 & 48 – Nestix Oy revenue extracts – 2016, 2018, 2020, 2022 financial statements.

Ohmtech AS

Norwegian analytics company, develops software acquired in 2015. Revenues have halved since acquisition. Profits are similarly down from NOK 6m pre-acquisition to NOK 3.6m in 2022.

Driftsinntekter og driftskostnader	Note	2016	2015
Driftsinntekter			
Salgsinntekt	1	45.057	6.979.245
Annen driftsinntekt	1	4.189.285	853.013
Sum driftsinntekter		4.234.342	7.832.259

Figure 49 – Micro-top Revenue & Net Profit - listafirme.ro extract

Liquidation Fire-Sales

Hexagon in the 00's never shied away from the fact that it acquires much of its revenue out of companies in insolvency administrations/liquidations.

We do not believe many of these entities fitted the futuristic focus of Hexagon, nor do they appear to have had the capacity to generate organic growth in line with Hexagon's strategic plans. Probably with this concern in mind: Hexagon now does not disclose that it purchases many entities from insolvency proceedings.

We believe many more of Hexagon's acquisitions are fire sales. There are circumstances where Hexagon acquires revenue as low as 0.5x. Note that these sales would likely be defined as asset purchases as of 2020, given developments in IFRS 3. Please refer to Section 3 for more detail.

Brown & Sharpe

One of Hexagon's largest ever acquisitions was that of the insolvent metrology instrument manufacturer, Brown & Sharpe. This really established Hexagon's metrology focus... Brown & Sharpe had revenues of SEK ~3,000 prior to its acquisition in 2001.

Hexagon substantially acquired the whole business and staff. It has retained the Brown & Sharpe brand, which is now manufactured across various of its facilities. CEO Olla Rollén notes that he was offered the job to lead Brown & Sharpe before accepting the top job at Hexagon.

GPD SPRL

Hexagon acquired machinery, inventory and the customers of this business out of liquidation in 2004. The automotive wheel manufacturer was immediately dissolved, merged into existing subsidiaries, then re-established in Sri-Lanka. Revenues are undisclosed.

Sheffield Automation

This was a metrology business acquired out of liquidation in 2004. The entire company immediately dissolved and merged into a new Hexagon entity called "Sheffield Measurement Inc". Pre-acquisition revenues were disclosed as SEK 125m.

Claughton Office Equipment

British Thornton, a subsidiary of Hexagon, acquired the assets of Claughton Office Equipment out of administration in 2015[22]. Claughton was deregistered, and British Thornton became the largest manufacturer of school desks in the UK. Yes, that's correct. School desks. This transaction went totally undisclosed by Hexagon.

J5 International

In 2019, Hexagon announced the acquisition of J5 International, "a market-leading developer of operations management software"[23]. The only J5 International Viceroy were able to locate was a company in liquidation in the UK, having already sold its product to another buyer. The circumstances are unclear. The financials of the acquired entity were undisclosed.

iConstruct Australia

Purchased in 2022. iConstruct appears to have been in administration proceedings two times in a 10-year period prior to its acquisition by Hexagon[24]. It was acquired for its Building Information Modelling (BIM) software. Hexagon did not disclose revenues.

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[22] https://construction-update.co.uk/2015/09/29/merger-creates-uks-biggest-educational-furniture-manufacturer/

[23] https://www.prnewswire.com/news-releases/hexagon-strengthens-its-industrial-facility-operations-portfolio-with-the-acquisition-of-j5-international-300780077.html

[24] https://publishednotices.asic.gov.au/browsesearch-notices/notice-details/iConstruct-AUS-Pty-Ltd-Administrators-Appointed-139099326/2d61e8e7-79bb-44ff-befb-18475229aed2

6. Aggressive accounting

Hexagon employ overly aggressive accounting measures to boost margins & mask operational deficiencies.

R&D, Amortization, and Margins

Viceroy have already demonstrated that substantially all revenue growth over the past 25 years has resulted from acquisition growth, not organic growth. It begs the question, then, whether Hexagon's ever-increasing R&D spend actually generates any growth for the business in aggregate, or simply allows the business to keep up with a fast-cycle market.

In any case, Hexagon has aggressively accounted for R&D capitalizations, expenses, and amortization periods over the last 10 years in a fashion which supports margins, but for reasons which we don't believe stack up against our findings. Capitalizing ~50% of R&D costs and amortizing these costs over a period of time has a superficial positive impact on Hexagon's margins.

R&D Analysis	2022	2021	2020	2019	2018	2017	2016	2015
Sales	5,161	4,341	3,764	3,908	3,761	3,448	3,149	3,044
R&D Total	**714**	**567**	**507**	**515**	**449**	**416**	**366**	**360**
% sales	*13.8%*	*13.0%*	*13.5%*	*13.2%*	*11.9%*	*12.1%*	*11.6%*	*11.8%*
R&D Capitalized	377.8	296.8	271.4	275.6	224.2	216.1	197.1	186
R&D Expensed	**336.5**	**269.7**	**235.9**	**239.1**	**224.9**	**199.5**	**169.1**	**173.7**
% Expensed	*47.1%*	*47.6%*	*46.5%*	*46.5%*	*50.1%*	*48.0%*	*46.2%*	*48.3%*
Amortization expensed	173.5	179	169.7	158	147.7	140.3	130.6	109.7
Amortization / capitalization	*45.9%*	*60.3%*	*62.5%*	*57.3%*	*65.9%*	*64.9%*	*66.3%*	*59.0%*

Figure 50 – Viceroy Analysis

We note that Hexagon's R&D vastly outpaces its expensed amortization. This will lead to a continually growing Intangible asset base. In 2016, we see amortization expenses of capitalized R&D totaling ~66% of capitalized costs. In 2022, this figure is 46%.

In 2021: Hexagon changed the useful life of its capitalized R&D from 2-6 years to 2-10 years. Broker notes (i.e. Kepler Cheuvreux) state that "management insists that the normal amortization period remains unchanged at 2-5 years". Clearly this does not appear to be the case.

Capitalised development expenses are measured at cost less accumulated amortisations and impairment. Amortisation is accounted for linearly based on estimated useful life and expensed as a research and development expense. Useful life for capitalised development expenses is 2-10 years. The assets' residual value and useful life are tested on each closing date and are adjusted if necessary.

Capitalised development expenses are measured at cost less accumulated depreciations and impairment. Depreciation is accounted for linearly based on estimated useful life and expensed as a research and development expense. Useful life for capitalised development expenses is 2-6 years. The assets' residual value and useful life are tested on each closing date and are adjusted if necessary.

Figure 51 – Hexagon 2021 vs 2020 financial disclosure comparisons

Given the above, we believe that margins are materially inflated by improper amortization of assets.

- Hexagon cannot demonstrate stated organic growth. In many instances, subsidiary revenues are in decline.
- The extended shelf-life of intangible capitalized R&D is nonsensical in a fast-paced technology life cycle.

Viceroy believes that amortization expenses should equal at least the capitalized amount of R&D each year.

R&D Analysis	2022	2021	2020	2019	2018	2017	2016	2015
R&D Capitalized	377.8	296.8	271.4	275.6	224.2	216.1	197.1	186
Amortization expensed	173.5	179	169.7	158	147.7	140.3	130.6	109.7
Earnings adjustment	**(204)**	**(118)**	**(102)**	**(118)**	**(77)**	**(76)**	**(67)**	**(76)**

Figure 52 – Viceroy Analysis

https://publishednotices.asic.gov.au/browsesearch-notices/notice-details/I-Construct-Pty-Ltd-084755797/06174ba7-39c2-4337-b594-f829b0ea8759

Goodwill – The Real R&D

In its aggressive acquisition spree, Hexagon has acquired an eye-watering €9.6b of Goodwill. This figure represents 98% of net book value. **Goodwill is Hexagon's largest asset class.**

Goodwill Analysis	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Opening	8,214	5,713	5,358	4,977	4,412	4,027	3,813	3,418	2,596	2,642	2,666
Investments	1,023	2,106	692	291	441	792	149	171	568	76	34
Impairment	**(8)**	**(8)**	**(9)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Reclassification	-	-	-	-	-	-	-	23	-	2	(23)
Translation differences	371	394	(336)	90	124	(407)	65	201	254	(123)	(35)
Closing	**9,600**	**8,206**	**5,706**	**5,358**	**4,977**	**4,412**	**4,027**	**3,813**	**3,418**	**2,597**	**2,642**

Figure 53 – Viceroy Analysis

Section 5 of this report shows that a vast portion of well-documented Hexagon acquisitions show negative growth & performance post-acquisition.

Section 4 of this report illustrates that substantially all revenue growth is driven by acquisitions.

Far from being an organic growth driver itself, it appears that Hexagon is acquiring businesses in order to not only maintain revenues, but to subsidize losses stemming from various subsidiaries and previous acquisitions.

Viceroy firmly believe that acquisition spend is like-for-like with R&D in Hexagon's instance. It acquires distributors, salespeople, competitors, third party software, and tangible businesses with short technology cycles that quickly and demonstrably become redundant.

The poor performance of Hexagon's acquisitions over time, which we have evidenced, has not properly been impaired in Goodwill. We ask the following:

- Considering that various Hexagon acquisitions' financial performance is indistinguishable from group performance as they are merged with existing Hexagon companies, how is goodwill tested in these circumstances?
- Considering that Viceroy have evidenced dozens upon dozens of acquisitions which individually appear to underperform and that these businesses represent significant portions of Goodwill, what is management and & audit's reasoning behind not making any significant Goodwill impairments over 25 years of acquisitions?

Intangible asset testing was identified as a key audit matter by PwC in its audit report:

Goodwill and other intangible assets with indefinite useful lives
Key audit matter
The carrying value of goodwill, and other intangible assets with indefinite useful lives represent some 65 percent of reported total assets. IFRS require annual impairment tests or when there is an indication that values could be impaired, given that the carrying value of these assets are not amortised.

Market data, Hexagon's business plans and forecasts on future development forms the expectations on sales, earnings and cash flows that are central in the model to calculate a recoverable value to be compared to the booked carrying value.

We have focused on the valuation of goodwill and intangible assets with indefinite useful lives as these items involve a large degree of judgment on behalf of management in assessing future cash flows.

The key assumptions used and management's sensitivity analysis for how changes in key assumptions would affect the value in use are presented in Note 8. As stated in Note 2 the impairment test require management estimates and assumptions such as projected cash flows, future market conditions and discount rates.

How our audit addressed the Key audit matter
Our audit procedures included amongst others a review of management impairment tests of goodwill and intangible assets with indefinite lives. We have examined whether Hexagon's impairment test is based on the divisions' (cash generating units) financial forecasts approved by management. We also evaluated the sensitivity analysis for changes in significant parameters, which, individually or on a collective basis, could imply the existence of an impairment requirement. Valuation experts have been involved to challenge the assumptions and estimates made by management. We have also assessed that disclosures are appropriate.

Figures 54 & 55 – Hexagon 2022 auditors report extract

We understand that the valuation of goodwill requires significant judgement, but we fail to see how a rudimentary check of acquisition entity performance (many presumably audited by PwC) did not immediately indicate that an impairment of value was required on a future-cash flow test. This is the largest asset class of Hexagon.

We would expect greater disclosures surrounding the valuation of Goodwill, valuation of such goodwill and the key components thereof.

Revenue

Given Hexagon's "unique" capital structure and aggressive accounting: we can see that asset efficiency has declined materially over 20 years against more conservative, transparent competitors.

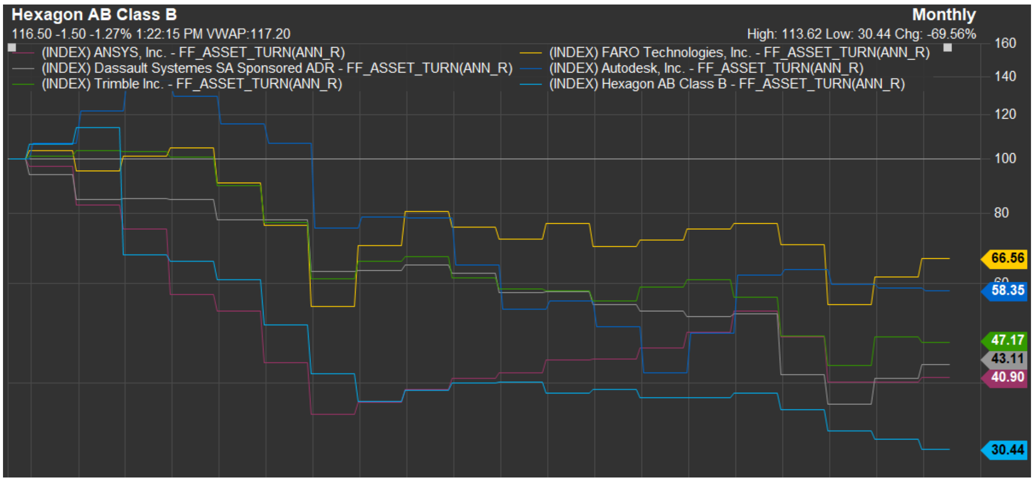

Figure 56 – Viceroy Analysis - Factset

Hexagon's asset turnover over the last 20 years (indexed against comps) has fallen significantly. This is to be expected as:

- Hexagon does not impair goodwill, which we describe as being like-for-like with R&D spend, and
- We observe numerous Hexagon acquisitions and subsidiaries are underperforming post-acquisition.

We have not formed significant opinions on Hexagon's revenue recognition policies at this stage. If anything: post-2018 licensing recognition methods may have allowed Hexagon to bring forward a lot of revenue. It is nigh impossible to know without access to Hexagon's workings.

We do note that as Hexagon's sales mix has moved from product/hardware to software and services, greater portions of revenues are deferred.

Comps

Hexagon's "unique" acquisition strategy, aggressive accounting and fleeting revenues become more apparent when pitched against competitors.

As discussed, Hexagon capitalizes significant portions of R&D and acquires (i.e. capitalizes) greater significant portions of R&D. We believe that Hexagon margins are vastly overstated. No listed comps come close to the margins Hexagon post with the exception of CAD software company Ansys (ANSS), which are posting 30-40%.

Channel checks suggest that Ansys is easily best in class for what it does, dominates its specific segment and spends far more on R&D than Hexagon does.

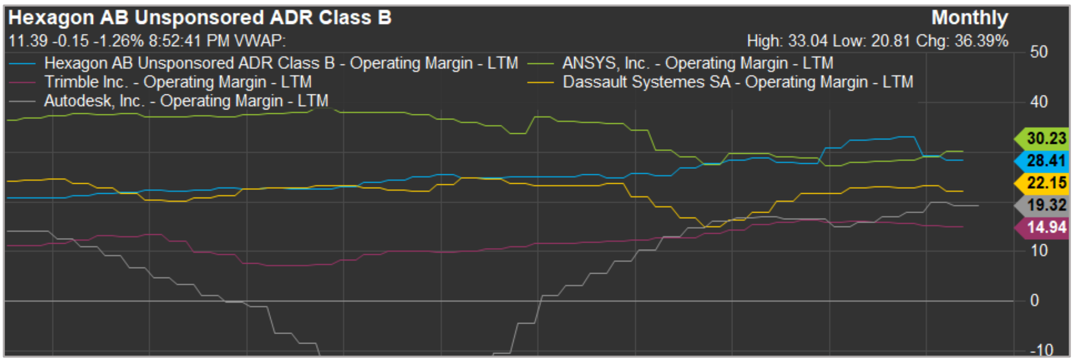

Figure 57 – Viceroy Analysis - Factset

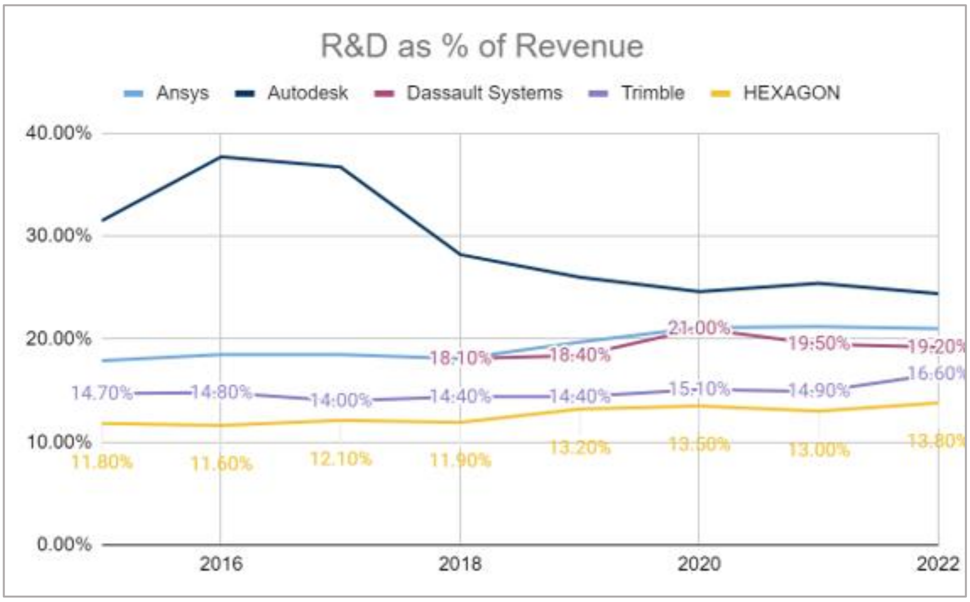

Figure 58 – Viceroy Analysis

The >20% operating margins are generally consistent within the grasp of dominant and/or highly specialized industrial software players like Dassault (large and dominant), and mid-teens-percent players are the realm of integrated hardware & software players like Trimble.

By Hexagon's own admission 40% of revenues are hardware or product related. Even when Hexagon sales were 85% hardware products, they achieved high-20% operating margins, which tops most competitors. Its margins appear implausible until the apparent aggressive accounting measures are understood.

As discussed, and as we can derive against competitors: **most of the rise in OPMs on closer inspection seems to be driven by capitalizing a lot of costs rather than merely a move into software and services and application of R&D.**

Comps disclosures on amortization schedules slightly differently, but we outlay them as best we can in the table below. Note that Hexagon' amortization periods for capitalized R&D is vastly greater than comps, outside of Ansys (who proportionately spend a lot more on R&D than Hexagon).

Hexagon - Comps Amortization (years)	R&D	Other	Patents & TM
Hexagon**	2 - 10	2 - 20	5
Trimble*	6	4 - 8	6
Dassault	3 - 5		
Ansys*	9		10
Faro	1 - 5	3 - 20	7 - 20
Autodesk	2 - 3	3 - 15	
* Use average			
** Does not significantly amortize Leica Brand			

Figure 59 – Viceroy Analysis

Cash flows

Following from the above: Viceroy firmly believe that Hexagon's acquisition outflows are like-for-like with R&D. It acquires distributors, salespeople, competitors, third party software, and tangible businesses with short technology cycles that quickly and demonstrably become redundant. It does this in lieu of conducting its R&D.

There is nothing inherently wrong with this, but for the purposes of analysis Viceroy believes that significant portions of acquisition costs should be considered like-for-like as capex.

Our analysis reflects 50% of acquired goodwill as capex. Given that it appears substantially all of Hexagon's organic growth appears to be derived from acquisitions, we believe this is conservative.

Cash Flow Analysis	**2022**	**2021**	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**
Operating earnings	1,287	1,010	787	892	925	760	736	656
Depreciation and amortisation	467	579	534	388	284	285	234	220
Other non-cash items	25	(26)	(51)	1	(21)	(62)	(36)	(4)
Net interest received (paid)	(38)	(29)	(25)	(23)	(22)	(17)	(18)	(21)
Taxes paid	(236)	(189)	(163)	(173)	(153)	(115)	(92)	(120)
Working capital changes	(174)	(21)	221	(22)	(61)	27	(50)	(27)
Cash flow from operating activities	**1,331**	**1,324**	**1,304**	**1,062**	**952**	**879**	**774**	**704**
Net investment in tangible assets	(139)	(107)	(97)	(114)	(155)	(49)	(51)	(36)
Net investment in intangible assets	(414)	(312)	(287)	(285)	(234)	(227)	(207)	(195)
Free cash flow (unadjusted)	**778**	**904**	**921**	**663**	**563**	**603**	**517**	**474**
Net investment in subsidiaries	(1,195)	(748)	(761)	-	(423)	(915)	(171)	(194)
of which Goodwill	*(1,023)*	*(2,106)*	*(692)*	*(291)*	*(441)*	*(792)*	*(149)*	*(171)*
Viceroy adjustment (50% Goodwill)	(512)	(1,474)	(485)	(203)	(308)	(554)	(104)	(119)
Viceroy adjusted free cash flow	**267**	**(570)**	**436**	**460**	**254**	**49**	**412**	**354**

Figure 60 – Viceroy Analysis

We believe that necessary R&D acquisitions significantly impact Hexagon FCF yields.

Free Cash Flow Yield	
Market cap (EUR - 14 Jul 2023)	27,685
FCF yield (unadjusted)	2.81%
Viceroy Adjusted FCF yield	0.96%

Figure 61 – Viceroy Analysis

Should it stop acquiring businesses, Hexagon would likely enjoy free cash flows. Given the operational performance we observe in Hexagon's operating subsidiaries and acquisitions, we believe that earnings will be fleeting.

Valuation

On this note, we believe a valuation of Hexagon shares is a futile exercise. There is simply not enough information and transparency from Hexagon's management to conduct any meaningful valuation analysis.

The Hexagon acquisition machine is complex. Our team is genuinely perplexed as to how Hexagon's investors have neither scrutinized acquisitions and Hexagon's corporate structure in the past, nor requested greater transparency into the material number of acquisitions made by management over the last 25 years.

Fundamentally, our analysis suggests that Hexagon is not a leading-edge tech enterprise with promising organic growth. It buys safe, mature revenues / R&D, reaps earnings over short technological life cycles, and can very likely generate some group synergies. It is an industrials conglomerate.

It should be valued as such, and not at ~6x revenues.

-The End-

Annexure 1 – The SEK Era

1998

1998 preceded the Schörling / Rollén combo by 2 years. Despite claims by management to the contrary its strategy was not vastly different to what it is now. Despite the lack of accounting guidelines and developments of IFRS around disclosures: 1998 accounts gave vastly more details into the acquisitions made by management than they do now.

Business segments were divided into:

1. Industrial Components & Systems
2. Niche Manufacturing
3. Norfoods

1998 Acquisition Analysis	**SEK m**
Net acquisition spend	442
1997 Revenue	4,218
add: Acquired revenue	*821*
1998 Revenue (estimate)	5,039
1998 Revenue (actual)	4,946
Delta (organic growth)*	**(93)**
Revenue acquired ('97)	821
Multiple X	*0.5*

Hexagon 1998 Acquisitions	**Revenue ('97)**
JW-Trading Oy	50
Elastomeric Engineering Company	60
"An operation which supplies raw materials to the food industry"	20
Bech Kjeldahl	285
Teck Instrument	50
Imporex Control Oy	17
Outokumpu Copper Brass Rod	329
Axjo Plastic AB	10
Total acquired revenue	**821**

Figure 62 – Viceroy Analysis: Sourced from Hexagon annual report 1998

** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

1999

Melker Schörling bought a controlling stake in Hexagon in 1999, and allegedly pronounced it “was basically garbage”. The 1999 business, again, is not substantially different from the business that exists today.

- Filtercon & O-Teckno – sales / distributors within AKA Group
- C-B Agentur – nondescript acquisition.
- Mobro Instrumentering – Danish “control & instrument” company.
- Precisions-Produkter – mechanical transmission manufacturer.
- Ostermo Mekaniska – manufacture of hydraulic cylinders.

1999 Acquisition Analysis	SEK m
Net acquisition spend	367
1998 Revenue	4,946
add: Acquired revenue	*120*
1999 Revenue (estimate)	5,066
1999 Revenue (actual)	4,667
Delta (organic growth)*	**(399)**
Revenue acquired (previous year)	120
Multiple	3.1

Hexagon 1999 Acquisitions	Revenue ('98)
Filtercon & O-Teckno	15
C-B Agentur	25
Mobro Instrumentering	25
Precisions-Produkter AB	15
Ostermo Mekaniska AB	40
Total acquired revenue	**120**

Figure 63 – Viceroy Analysis: Sourced from Hexagon annual report 1998

** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

2000

Melker Schörling effectively appoints Ola Rollén as President & CEO of Hexagon. Rollén's strategy is defined in the following:

- Focusing operations by reducing the number of business units and business activities
- Increasing turnover, "a natural step for guaranteeing profit growth", by constantly expanding
- Restructuring cyclical subsidiaries to be able to adapt to changing market conditions

Hexagon sold its Norfoods business, along with various other scattered businesses, in 2000, which represented SEK 1.9b in revenues[25]. This is the largest disposal of revenues for many years.

The major acquisition in 2000 was Berendsen. Its accounts suggest this was a fire-sale. Hexagon also made a bid for Brown & Sharpe's metrology business, which was in liquidation. This was acquired in 2001.

- Berendsen PMC – hydraulics operations in the Nordics.
    - GL Hydraulik – hydraulic service and maintenance
- Sweden Eurosteel – steel e-commerce

2000 Acquisition Analysis	SEK m
Acquisition consideration	196
Less: cash acquired	(6)
Net acquisition spend	190
1999 Revenue	4,667
*add: Acquired revenue**	*1,100*
*Less: Disposed revenue***	*(1,980)*
2000 Revenue estimate	3,787
2000 Revenue actual	5,099
Delta (organic growth)***	**1,312**
Revenue acquired (previous year)*	1,100
Multiple	0.2

Hexagon 2000 Acquisitions	Revenue ('99)
Berendsen PMC	1,100
GL Hydraulik	N/A
Sweden Eurosteel	N/A
Total acquired revenue	**1,100**

Figure 64 – Viceroy Analysis: Sourced from Hexagon annual report 1998

** Revenue figures for GL Hydraulik & Sweden Eurosteel not available. These acquisitions were noted as not material, however we believe they are likely material in aggregate.*

*** Disposed revenue may include Tecla, which was disposed in early 2001. Again, this will smooth out over multi-year analysis.*

**** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

[25] Hexagon 2000 annual accounts

2001

The acquisition of insolvent Brown & Sharpe birthed Hexagon's metrology business area. Rollén advised that he had previously been offered the chair at Brown & Sharpe and refused[26]. Thus, it is expected he knew somewhat of the business operations.

- Browne & Sharpe – metrology business in liquidation.
  - Wilcox & Associates – Software developer for Brown & Sharpe solutions
  - Meas Inc – Brown & Sharpe distributor
  - Miokromess – Brown & Sharpe distributor
- HTR Hydrauliiika Oy – hydraulic motors for the mobile sector
- Cubic Tavleproduktion – Either wind, or solar panel distributor (disclosures unclear).

We note that some sales finalized in 2001 were accounted for in 2000 analysis due to Hexagon aggregation of "sold revenue" figures.

2001 Acquisition Analysis	**SEK m**
Acquisition consideration	1,893
Less: cash acquired	(109)
Net acquisition spend	1,784
2000 Revenue	5,099
add: Acquired revenue	*3,265*
2001 Revenue (estimate)	8,364
2001 Revenue (actual)	6,204
Delta (organic growth)*	**(2,160)**
Revenue acquired (previous year)	3,265
Multiple	0.5

Hexagon 2001 Acquisitions	**Revenue****
HTR Hydrauliikka Oy	35
Wilcox & Associates, Inc.	70
Cubic Tavleproduktion AB	110
Meas Inc & D&R Services	20
Miokromess	30
Brown & Sharpe	3,000
Total acquired revenue	**3,265**

Figure 65 – Viceroy Analysis: Sourced from Hexagon annual report 2001 & local company filings

** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

*** 2000 & 2001 revenue figures used where available.*

Note: purple flags on subsidiaries denote distributors

[26] From tuna to tech, Hexagon breaks Swedish mould – Reuters 27 Mar 2013

2002

- Mirai – an Italian metrology software company, focused on automotive industry [try find accounts for this – difficult slog for old Italian ones]
- Quality Ltda – Brazilian metrology distributor for new sales and aftermarket.
- Xygent – nondescript acquisition to add "technology and competence"
- GFD Technology – Rubber compound manufacturer
- CE Johansson – Appears to be acquired from a restructuring. Manufacturer of "small" metrology equipment & medical metrology.

2002 Acquisition Analysis	SEK m
Acquisition consideration	231
Less: cash acquired	(12)
Net acquisition spend	219
2001 Revenue	6,204
add: Acquired revenue	*510*
2002 Revenue (estimate)	6,714
2002 Revenue (actual)	6,997
Delta (organic growth)*	**283**
Revenue acquired (previous year)**	510
Multiple	0.4

Hexagon 2002 Acquisitions	Revenue ('01)
Mirai Rsl	N/A
Quality Ltda.	40
Xygent, Inc.	N/A
GFD Technology GmbH	300
CE Johansson AB	170
Cylinderservice AS**	50
Total acquired revenue	**560**

Figure 66 – Viceroy Analysis: Sourced from Hexagon annual report 2002 & local company filings

** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

*** Where available. Not adjusted for intra-group sales.*

Note:

- *Purple flags on subsidiaries denote distributors. Many distributors are immediately dissolved and merged into existing umbrella entities.*
- *Red flags denote other acquisitions that were immediately dissolved and merged into existing umbrella entities.*

2003

Hexagon exclaimed that it had now defined its corporate strategy through the following operational objectives[27]:

- Market position
- Cost-efficiency
- Innovation
- Leadership

It also defined its financial objectives:

1. EPS growth of 15% pa
2. Equity ratio of 25-35%
3. Positive cash flow (specifically so that it could run the business with more debt)
4. ROC of >15% over a business cycle (?)

Acquisition spend in 2003 was slim, so we do not expect undisclosed acquired revenue to be significant.

- 15% of **Qingdao** Brown & Sharpe entities – remaining 85% owned by CCP. The company manufactures and distributes Global CMM for Hexagon.
- Sud Mesure – developing a "three-dimensional vision machine", which in reality was an aftermarket product complementing existing Hexagon metrology businesses.

2003 Acquisition Analysis	SEK m
Acquisition consideration	8
Less: cash acquired	1
Net acquisition spend	9
2002 Revenue	6,997
add: Acquired revenue [not available]	-
2003 Revenue (estimate)	**6,997**
2003 Revenue (actual)	7,103
Delta (organic growth)	**106**

Hexagon 2003 Acquisitions	Revenue ('02)
Qingdao Brown & Sharpe Trading Co Ltd	N/A
Qingdao Brown & Sharpe Quinshao Technology (	N/A
Sud Mesure SA	N/A
Total acquired revenue	**-**

Figure 67 – Viceroy Analysis: Sourced from Hexagon annual report 2003 & local company filings

[27] Hexagon 2003 annual report

2004

A number of acquisitions this year were assets and businesses of bankrupt entities. We do not see how this is innovative, and aggregate revenue purchases show the results were subsequently underwhelming.

- GPD SPRL – Acquired machinery, inventory and customers out of a Liquidation. Business was immediately dissolved, merged into existing subsidiaries, then re-established in Sri-Lanka. Revenues undisclosed.
- Romer CimCore & Romer SA – develop portable measurement devices.
- POLI SpA – Acquired out of Receivership. "Access" to low-cost equipment for measuring sheet metal.
- Thona Group – Rubber compounds manufacturing for automotive industry.
- Korea ErFa Systems – Appear to be a distributor.
- Sheffield Automation – Acquired out of liquidation. Entire company immediately dissolved and merged into a new Hexagon entity called "Sheffield Measurement Inc"

2004 Acquisition Analysis	SEK m
Acquisition consideration	916
Less: cash acquired	(58)
Net acquisition spend	858
2003 Revenue	7,103
add: Acquired revenue	*375*
2004 Revenue (estimate)	**7,478**
2004 Revenue (actual)	8,256
Delta (organic growth)*	**778**
Revenue acquired (previous year)**	375
Multiple	2.3

Hexagon 2004 Acquisitions	Revenue ('03)
GPD SPRL	N/A
Romer CimCore, Inc.	117
Romer SA	8
POLI SpA	15
Thona Group	100
Metrology Operations of Korea ErFa Systems Eng (	10
Sheffield Automation	125
Total acquired revenue	**375**

Figure 68 – Viceroy Analysis: Sourced from Hexagon annual report 2004 & local company filings

** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

*** Where available. Not adjusted for intra-group sales.*

2005

- Leica Geosystems – One of Hexagon's largest acquisitions in the metrology space. Hexagon "won" a bidding war with Danaher for a cash deal, some 30% above its initial offer, and >50% above the trading value of the company prior to acquisition proposals. We note that Leica, in itself, was also a serial acquirer, with the same valuation gimmicks as Hexagon.
- CMM Systems of Starrett – This division specifically was raided in a US investigation on whether or not the division defrauded customers, including government agencies[28]. Starrett disposed its entire metrology division to Hexagon.
- Trostel SEG wheel division – Company immediately dissolved, blended into existing entities.

2005 Acquisition Analysis	**SEK m**
Acquisition consideration	8,757
Less: cash acquired	(38)
Net acquisition spend	8,719
Previous year revenue	8,256
add: Acquired revenue	*4,641*
Estimate end of year revenue	**12,897**
Actual end of year revenue	9,637
Delta (organic growth)*	**(3,260)**
Revenue acquired (previous year)	4,641
Multiple	1.9
Hexagon 2005 Acquisitions	**Revenue ('04)**
Trostel SEG, Inc. /Wheel Division/	97
Leica Geosystems AG	4,470
CMM Systems	74
Total acquired revenue	**4,641**

Figure 69 – Viceroy Analysis: Sourced from Hexagon annual report 2005 & local company filings

** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

Note:

- *Red flags denote acquisitions that were immediately dissolved and merged into existing umbrella entities.*

[28] https://www.thefreelibrary.com/Feds+investigate+Starrett+on+its+Rapid+Check+CMMs.-a092800286

2006

Herein begins Hexagon's acquisitions of various small businesses which are individually immaterial to revenue and earnings, but are material in aggregate. Individually, organic growth is difficult to verify. Viceroy has filled in the blanks sufficiently that we can debunk the organic growth thesis.

- Mikrofyn – Danish developer, manufacturer of measurement systems & laser.
- Thaimach Sales & Service – A Hexagon distributor.
- Scanlaser AS & Scanlaser AB – Hexagon distributors.

2006 Acquisition Analysis	SEK m
Acquisition consideration	204
Less: cash acquired	(6)
Net acquisition spend	198
2005 Revenue	9,637
*add: Acquired revenue**	*220*
2006 Revenue (estimate)	**9,857**
2006 Revenue (actual)	13,469
Delta (organic growth)**	**3,612**
Revenue acquired (previous year)*	220
Multiple	0.9

Hexagon 2006 Acquisitions	Revenue ('05)
Mikrofyn A/S	100
Thaimach Sales & Service Co. Ltd.	N/A
Scanlaser AS	120
Scanlaser AB	
Total acquired revenue	**220**

Figure 70 – Viceroy Analysis: Sourced from Hexagon annual report 2006 & local company filings

** Where available. Not adjusted for intra-group sales.*

*** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

Note:

- *Purple flags on subsidiaries denote distributors. Many distributors are immediately dissolved and merged into existing umbrella entities.*

2007

Hexagon begins aggressively borrowing in order to feed acquisition strategy. It spends over 4x on acquisitions than it does on any R&D of its own. Its acquisitions are, generally speaking, mature entities with developed sales or their very own distributors.

- R&A Rost Vertriebsgesellschaft, Geopro & Junglas – European surveying & construction equipment distributors.
- NovAtel – developer of Global Naviation Satellite System (GNSS)
- CogniTens – 3D measurement technology
- Gold Key – Rubber compound production
- Willi Gesswein – Distributor
- Jingjiang Measuring Tools – Caliper manufacturer. Hexagon increases its ownership in JMT to 80% from 20%.
- IONIC – Software products, geospatial information
- Transmetal – Distributor
- Earth Resource Mapping – Simon Cope associated entity, acquired by Hexagon. Simon Cope was associated with various entities which were acquired by Leica Geosystems. Geospatial imagery server application.
- GAMFI & Agatec – Supplier of laser tools to construction industry.
- Acquis – web-based data editing of geospatial information
- Allen Precision Equipment – Distributor of survey equipment
- D&P Systems & Topolaser – Poorly disguised distributors of survey and construction equipment.
- Jigsaw Technologies – Fleet management software
- Svensk Byggnadsgeodesi – multidimensional measurement systems.
- SCANIA – automotive component manufacturing for Scania. Effectively a distributor.

Hexagon management in discussions with hedge funds that not all acquisitions were disclosed in financial accounts.

2007 Acquisition Analysis	SEK m
Acquisition consideration	4,878
Less: cash acquired	(1,101)
Net acquisition spend	3,777
2006 Revenue	13,469
*add: Acquired revenue**	*2,143*
2007 Revenue (estimate)	**15,612**
2007 Revenue (actual)	14,587
Delta (organic growth)**	**(1,025)**
Revenue acquired (previous year)	2,143
Multiple	1.8

Hexagon 2007 Acquisitions	Revenue ('06)
Rudolf & August Rost Vertriebsgesellschaft mbH	
Geopro Kft	60
Junglas Feinmechnik Vermessungs- und Lasertec	
NovAtel, Inc.	604
CogniTens	54
Gold Key Processing Ltd.	507
Willi Geßwein GmbH	1
Jingjiang Measuring Tools Co. Ltd.	80
IONIC Software SA	10
Transmetal AS	40
Earth Resource Mapping Ltd.	57
GAMFI International SAS	296
Agatec SAS	
Acquis, Inc.	3
Allen Precision Equipment, Inc.	24
D&P Systems SARL***	57
Topo Laser System SAS***	
Jigsaw Technologies	61
Svensk Byggnadsgeodesi AB	40
SCANIA AB /Sibbhult Gearbox Components Plant	250
Total acquired revenue	**2,143**

Figure 71 – Viceroy Analysis: Sourced from Hexagon annual report 2007 & local company filings

** Where available. We note that not all acquisitions are disclosed. Not adjusted for intra-group sales.*

*** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

**** Wording from Hexagon confusing. May not include all revenue.*

Note:

- *Purple flags on subsidiaries denote distributors. Many distributors are immediately dissolved and merged into existing umbrella entities.*

2008

- Rinex – Agricultural hardware and software for agricultural purposes.
- Serein – Low price CMM provider
- M&H – Deploys machine tool probes under IES metrology division
- Messtechnik Wetzlar – Quality control software. Rolled into Hexagon Metrology w/ M&H when revenues started to fade. Metrology was acquisition umbrella for future acquisitions, however as these subsided, revenues continued to decline.
- Viewserve – Fleet management software. Appears to have become totally redundant. By 2012, this company was renamed /blended into Leica Geosystems and became a consolidation umbrella for other acquisitions.
- Advanced Metrology Solutions – Distributor for Sheffield CMM products
- Santiago & Cintra Iberica – Distributor of positioning systems/solutions
- Haselback Surveying Instruments – Distributors of surveying equipment
- Surveyors Service – Distributors of surveying equipment
- Elcome Technologies – Distributor of positioning systems/solutions

2008 Acquisition Analysis	**SEK m**
Acquisition consideration	874
Less: cash acquired	(73)
Net acquisition spend	801
2007 year revenue	14,587
*add: Acquired revenue**	*413*
2008 Revenue (estimate)	**15,000**
2008 Revenue (actual)	14,479
Delta (organic growth)**	**(521)**
Revenue acquired (previous year)*	413
Multiple	1.9

Hexagon 2008 Acquisitions	**Revenue ('07)**
Rinex Technology Pty. Ltd.	30
Serein Metrology (Shenzhen) Co. Ltd.	26
M&H Group	90
Messtechnik Wetzlar GmbH	20
Viewserve AB	7
Advanced Metrology Solutions, Inc.	30
Santiago & Cintra Iberica SA	100
Haselbach Surveying Instruments, Inc.	75
Surveyors Service Co.	
Elcome Technologies Pvt Ltd.	35
Total acquired revenue	**413**

Figure 72 – Viceroy Analysis: Sourced from Hexagon annual report 2008 & local company filings

2009

Hexagon disclosures become increasingly opaque. Viceroy become increasingly reliant on individual subsidiary filings in their respective jurisdictions.

- Mycrona – Manufacturer of 3D multi-sensor coordinate measuring machines.
- Mahr Multisense – Coordinate measurement systems
- Loyola Spatial Systems – distributor and servicing for Hexagon products.

2009 Acquisition Analysis	SEK m
Acquisition consideration	71
Less: cash acquired	-
Net acquisition spend	71
2008 Revenue	14,479
*add: Acquired revenue**	*68*
2009 Revenue (estimate)	**14,547**
2009 Revenue (actual)	11,811
Delta (organic growth)**	**(2,736)**
Revenue acquired (MAX)*	68
Multiple	1.0

Hexagon 2009 Acquisitions	Revenue (MAX)
MYCRONA Gesellschaft für innovative Messtechni	60
Mahr Multisensor GmbH	
Loyola Spatial Systems	8
Total acquired revenue	**68**

Figure 73 – Viceroy Analysis: Sourced from Hexagon annual report 2009 & local company filings

** Where available. We note that not all acquisitions are disclosed. Not adjusted for intra-group sales.*

*** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

Note: Hexagon's acquisition disclosures become extremely poor after 2007. Viceroy has obtained revenue figures of subsidiaries where available through local company house filings. We attribute MAX revenue of acquisition year or previous year. In most cases, we are unable to obtain figures for both years, and in many cases, financial figures are not available at all.

2010

2010 marks the end of the SEK reporting era. Immediately after a global recession and “restructuring” of Hexagon: management decided to make their biggest acquisition ever: Intergraph.

Intergraph was bought by PE groups in 2006 in an open market for US $1.3b. Intergraph itself then went on an acquisition spree (albeit, not the degree of Hexagon) between 2006 and 2010. Hexagon, on acquisition proposal, decided it was unnecessary to distinguish between Integraph’s organic growth and acquisition growth.

Hexagon acquired Intergraph at a 100% premium to the PE transaction in ’06, during which time there was a global recession. Filings suggest that Intergraph sales were brought forward prior to the transaction, given the volume of receivables.

Intergraph is a 3D GI & CAD software provider. It is a mature company.

We note that Hexagon appears to have made other acquisitions in 2010, however we have not been able to identify them.

2010 Acquisition Analysis	SEK m
Acquisition consideration	15,804
Less: cash acquired	(741)
Net acquisition spend	15,063
2009 Revenue	11,811
*add: Acquired revenue**	*6,003*
2010 Revenue (estimate)	**17,814**
2010 Revenue (actual)	14,096
Delta (organic growth)**	**(3,718)**
Revenue (MAX)	6,003
Multiple	2.5

Hexagon 2010 Acquisitions***	Revenue ('10)
Intergraph Corp.	6,003
Total acquired revenue	**6,003**

Figure 74 – Viceroy Analysis: Sourced from Hexagon annual report 2010 & local company filings

** Where available. We note that not all acquisitions are disclosed. Not adjusted for intra-group sales.*

*** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

**** It does not appear that all of Hexagon’s acquisitions were disclosed in its annual report.*

Annexure 2 – The EUR Era

2011

From 2011 onwards, Hexagon's acquisition disclosures become almost non-existent. Financial data of subsidiaries is extremely difficult to obtain. In 2011, all of Hexagon's disclosed acquisitions were distributors, servicing, and add-ons.

- Sisgraph – Intergraph distributor in South America.
- Augusta Systems – Intergraph add-on.
- Denali – Intergraph "records management" add-on.
- Seven Ocean – Metrology add-on.

2011 Acquisition Analysis	**EUR m**
Acquisition consideration	111
Less: cash acquired	(4)
Net acquisition spend	107
2010 Revenue	1,481
*add: Acquired revenue**	*11*
2011 Revenue (estimate)	**1,492**
2011 Revenue (actual)	2,169
Delta (organic growth)**	**677**
Revenue (MAX)*	11
Multiple	10

Hexagon 2011 Acquisitions***	**Revenue (MAX)**
SISGRAPH Ltda.	11
Augusta Systems, Inc.	N/A
Denali Solutions LLC	N/A
Seven Ocean	N/A
Total acquired revenue	**11**

Figure 75 – Viceroy Analysis: Sourced from Hexagon annual report 2011 & local company filings

** Where available. We note that not all acquisitions are disclosed. Not adjusted for intra-group sales.*

*** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

2012

- GTA Geoinformatik – 3D modelling. Financial accounts pulled from Germany corporate registry show that GTA became massively loss-making after being acquired by Hexagon.
- Geosystems Kazakhstan – Distributor.
- Northwest Geomatics – Aerial mapping.
- Sematec – Servicing
- New River Kinematics – 3D Analysis software for portable metrology applications.
- Microsurvery – Develops surveying equipment
- Lasertopo – Distributor
- My Virtual Reality Software – provides real-time virtual viewing technology.
- Visavaya Oy – Distributor

2012 Acquisition Analysis	EUR m
Acquisition consideration	65
Less: cash acquired	(1)
Net acquisition spend	64
Previous year revenue	2,169
*add: Acquired revenue**	*34*
2012 Revenue (estimate)	**2,203**
2012 Revenue (actual)	2,380
Delta (organic growth)**	**177**
Revenue (MAX)	34
Multiple	2

Hexagon 2012 Acquisitions	Revenue (MAX)
GTA Geoinformatik GmbH	7
Geosystems Kazakhstan	2
North West Geomatics Ltd.	10
Blom ASA***	N/A
Sematec	N/A
New River Kinematics	10
Microsurvery Software Inc.	2
Lasertopo	0.7
My Virtual Reality Software AS	0.5
Visava Oy	2
Total acquired revenue	**34**

Figure 76 – Viceroy Analysis: Sourced from Hexagon annual report 2012 & local company filings

** Where available. We note that not all acquisitions are disclosed. Not adjusted for intra-group sales.*

*** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

**** Minority interest acquisition*

Note: Red cells denote Viceroy Revenue estimates derived from receivables @ 30-day terms.

2013

- Pixis – Distributor.
- Airborne Hydrography AB – Sensor provider
- Hexagon Mining Technologia e Sistemas (Devex) – Appears to have multiple ongoing litigations against Brazillian tax authorities[29].
- Geosoft SRL – Develops cartography products.
- A/M/T Software Service AG – Distributor
- Kompakt – Distributor
- Manfra – Distributor
- Listech – Software "data processing"
- Navgeokom – Distributor

2013 Acquisition Analysis	EUR m
Acquisition consideration	88
Less: cash acquired	(11)
Net acquisition spend	77
2012 Revenue	2,380
*add: Acquired revenue**	*24*
2013 Revenue (estimate)	**2,404**
2013 Revenue (actual)	2,429
Delta (organic growth)**	**25**
Revenue (MAX)*	24
Multiple	3.2

Hexagon 2013 Acquisitions	Revenue (MAX)
Pixis Ltda.	N/A
Airborne Hydrography AB	4
Hexagon Mining Tecnologia e Sistemas SA (Devex)	12
Geosoft SRL	N/A
A/M/T Software Service AG	N/A
Kompakt	N/A
Manfra & Companhia Ltda.	7
LISTECH Pty Ltd.	1
Navgeokom	N/A
Total acquired revenue	**24**

Figure 77 – Viceroy Analysis: Sourced from Hexagon annual report 2013 & local company filings

** Where available. We note that not all acquisitions are disclosed. Not adjusted for intra-group sales.*

*** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

Note: Purple flags on subsidiaries denote distributors. Many distributors are immediately dissolved and merged into existing umbrella entities.

[29] https://www.jusbrasil.com.br/processos/nome/174950250/hexagon-mining-tecnologia-e-sistemas-s-a

2014

- Aibotix – UAV hardware for surveying. Filings from the German corporate registry show revenues peaked around 2019, and have since fallen sharply.
- Veripos – Offshope marine positioning. This appears to be Hexagon's most substantial acquisition in 2013.
- Arvus – Agricultural hardware
- Ilab Systemas – Agricultural solutions. Immediately folded into Brazilian umbrella.
- SAFEmine – Mine traffic safety solution.
- GT Strudl – US software development.
- Mintec – Mining software & service
- North West Geomatics – Imagery program
- Geodata Diffusion – RTK connection services
- Vero Software – CAM software. The largest Hexagon acquisition since Intergraph. Vero no longer consolidates its own group accounts. Revenues in local subsidiaries obtained by viceroy show volatile accounts with no consistent growth. Vero also made acquisitions within its subsidiary to stimulate growth.

2014 Acquisition Analysis	EUR m
Acquisition consideration	649
Less: cash acquired	(50)
Net acquisition spend	598
2013 Revenue	2,429
*add: Acquired revenue**	*194*
2014 Revenue (estimate)	**2,623**
2014 Revenue (actual)	2,622
Delta (organic growth)	**(0.3)**
Revenue (MAX)*	194
Multiple	3

Hexagon 2014 Acquisitions	Revenue (MAX)
Vero Software Ltd.	85
Geodata Diffusion SAS	N/A
North West Geomatics Ltd.	10
ilab Sistemas Especialistas de Informática Ltda.	N/A
Arvus Tecnologia Ltda.	N/A
Mintec, Inc.	34
GT Strudl	N/A
SAFEmine Ltd.	13
Aibotix GmbH	15
Veripos, Inc.	37
Total acquired revenue	**194**

** Where available. We note that not all acquisitions are disclosed. Not adjusted for intra-group sales.*

*** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

Note: Red flags on subsidiaries denote companies that appear to have been immediately dissolved and merged into existing umbrella entities.

2015

- Camtech – Distributor of “manufacturing intelligence”. Revenues estimated from 30 receivable days (working capital efficiency).
- PT Leica Geosystems – Distributor of Leica in Indonesia
- Leica Geosystems Singapore – Distributor of Leica in Singapore
- Claughton Office Equipment – British Thornton, a subsidiary of Hexagon, acquired the assets of Claughton Office Equipment out of administration in 2015[30]. British Thornton became the largest manufacturer of school desks in the UK. This transaction was undisclosed by Hexagon. Revenues estimated from 30 receivable days (working capital efficiency).
- Ecosys Management – Enterprise project planning software
- Blue Iron Systems – Material handling solutions
- Tech-net rail 2010 – Mobile mapping technology. Revenues estimated from 30 receivable days.
- Q’Das Inc – “Statistical process control software”
- Ohmtech AS – Norwegian analytics company, develops software. Revenues have halved since acquisition. Profits down from NOK 6m pre-acquisition to NOK 3.6m in 2022.

2015 Acquisition Analysis	EUR m
Acquisition consideration	245
Less: cash acquired	(4)
Net acquisition spend	242
2014 Revenue	2,622
*add: Acquired revenue**	*83*
2015 Revenue (estimate)	**2,705**
2015 Revenue (acutal)	3,043
Delta (organic growth)**	**338**
Revenue (MAX)*	83
Multiple	3

Hexagon 2015 Acquisitions	Revenue (MAX)
CAMTECH GmbH & Co. KG	6
PT Leica Geosystems	N/A
Leica Geosystems Singapore	3
Claughton Office Equipment Ltd.	22
EcoSys Management LLC	26
Blue Iron Systems, Inc.	N/A
technet-rail 2010 GmbH	10
Q-DAS Inc.	15
OhmTech AS	1
Total acquired revenue	**83**

Figure 78 – Viceroy Analysis: Sourced from Hexagon annual report 2015 & local company filings

** Where available. We note that not all acquisitions are disclosed. Not adjusted for intra-group sales.*

*** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

Note: Purple flags denote distributors. Many are immediately dissolved and merged into Hexagon umbrella entities. Red flags on subsidiaries denote companies that appear to have been immediately dissolved and merged into existing umbrella entities.

[30] https://construction-update.co.uk/2015/09/29/merger-creates-uks-biggest-educational-furniture-manufacturer/

2016

- GI Squatrat – "Data & Applications for infrastructure and public services". Estimated revenues estimated from 30 receivable days (working capital efficiency).
- Apodius – Startup with focus on metrology for applications with fiber parts. Appears to be pre-revenue.
- Multivista –Cloud based enterprise solutions for geospatial and industrial sectors. Runs franchise model.
- Nestix Oy – Software for steel manufacturing. Revenues and earnings both materially fall post-acquisition.
- Hostsure – Cloud solutions for power & energy markets. Revenues fall significantly after earnings.
- AICON 3D systems – "optical 3D metrology" used in manufacturing.
- Forming Technologies – manufacturing software servicing sheet metal manufacturing.
- IDS Ingegneria Dei Sistemi / Georadar – Radar solutions for structural health monitoring.
- SigmaSpace Corp – 3D mapping company.
- Cambridge Systematics Vehicle permitting solution – Oversize/weight vehicle permitting software. This seems to be novel.
- Micro-top – Distributor. Revenue falls off a cliff post-acquisition.
- M&P Surveying Equipment – Distributor. Most of revenue appears to be the renting of survey equipment.
- GPS Solutions Inc. – High precision positioning software.
- Paul Macarthur – Distributor of Leica.

2016 Acquisition Analysis	EUR m
Acquisition consideration	208
Less: cash acquired	(9)
Net acquisition spend	199
2015 Revenue	3,043
*add: Acquired revenue**	*116*
2016 Revenue (estimate)	**3,159**
2016 Revenue (actual)	3,149
Delta (organic growth)**	**(10)**
Revenue (MAX)	116
Multiple	2

Hexagon 2016 Acquisitions	Revenue (MAX)
GISquadrat GmbH	14
Apodius GmbH	N/A
Multivista Systems LLC	N/A
NESTIX Oy	4
HostSure, Ltd.	4
AICON 3D Systems GmbH	20
Forming Technologies, Inc.	7
IDS Ingegneria Dei Sistemi SpA /Georadar Div/	18
SigmaSpace Corp.	23
Cambridge Systematics, Inc. /Vehicle Permitting S	N/A
Micro-top	2
M&P Survey Equipment Lt.	1
GPS Solutions Inc.	N/A
Paul Macarthur Ltd.	24
Total acquired revenue	**116**

Figure 79 – Viceroy Analysis: Sourced from Hexagon annual report 2016 & local company filings

** Where available. We note that not all acquisitions are disclosed. Not adjusted for intra-group sales.*

*** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

Note: Purple flags denote distributors. Many are immediately dissolved and merged into Hexagon umbrella entities. Red flags on subsidiaries denote companies that appear to have been immediately dissolved and merged into existing umbrella entities.

2017

- Kronion – Acquired assets. Blended into Hexagon. Appears to have dissolved company or left dormant post acquisition of assets. Estimated revenues estimated from 30 receivable days (working capital efficiency).
- Luciad – “5D Maps” developer, which Hexagon defines as simply analyzing 3D maps.
- DST Computer Services – Swiss analytics company focusing on piping stress for the nuclear industry.
- FASysy Industrie-EDV-Systeme – Machine tools management software. Estimated revenues estimated from 30 receivable days (working capital efficiency).
- VIRES Simulationstechnologie – German simulations software developer.
- Catavolt – Mobile app developer (?). Does not specify where in Hexagon sector this fits in.
- MSC Software – Software developer for Scania trucks. Appears to be a third-party software acquisition.
- Industrial Business Solutions – USA based commissioning & completion software developer.
- Plant Design Solutions – Distributor to USA, unspecified field.
- InfraMeasure – US based tunneling and railroad solutions provider.
- IDS Georadar North America & Australia – Distributors, unspecified.
- MiPlan Consulting – Since deregistered.

2017 Acquisition Analysis	**EUR m**
Acquisition consideration	954
Less: cash acquired	(38)
Net acquisition spend	916
2016 Revenue	3,149
*add: Acquired revenue**	*276*
2017 Revenue (estimate)	**3,425**
2017 Revenue (actual)	3,448
Delta (organic growth)**	**23**
Revenue (MAX)*	276
Multiple	3.3

Hexagon 2017 Acquisitions	**Revenue (MAX)**
Kronion GmbH	9
Luciad NV	21
Dst Computer Services SA	N/A
FASys Industrie-EDV-Systeme GmbH	12
VIRES Simulationstechnologie GmbH	26
Catavolt, Inc.	N/A
MSC Software Corp.	209
Industrial Business Solutions, Inc.	N/A
Plant Design Solutions, Inc.	N/A
InfraMeasure Inc.	N/A
IDS Georadar North America	N/A
IDS Georadar Australia	N/A
MiPlan Consulting Pty Ltd.	N/A
Total acquired revenue	**276**

Figure 80 – Viceroy Analysis: Sourced from Hexagon annual report 2017 & local company filings

** Where available. We note that not all acquisitions are disclosed. Not adjusted for intra-group sales.*

*** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

Note: Purple flags denote distributors. Many are immediately dissolved and merged into Hexagon umbrella entities.

Annexure 3 – The Modern Era

Note that the following years' disclosures are virtually non-existent and financials records of local subsidiaries are difficult to obtain. We include extra tables, as noted, where revenue has been extrapolated from transaction multiples.

2018

- Bricsys – CAD software developer.
- Guardvant – Mine safety solutions
- External-Array Software (Beijing) – a "Chinese software company providing a local solution for CMM's in the Chinese market". Software developer. Financials not disclosed.
- Spring Technologies – "Software provider specializing in integrated solutions for maximizing workflow". It appears to be just a distributor. Revenue falls through to 2021.
- LSE – Italian provider of software solutions for Geomatics market. No further disclosures. No press release on company website. Cannot find "LSE" on Italian registry. Presumably distributor.
- PipingDesignOnline.com – Hexagon undisclosed acquisition. The website of the company (presumably pipingdesignonline.com) is no longer live. Acquired under PPM division.
- AutonomouStuff - Autonomous vehicle software fad acquisition. Fallen behind every other major player.
- Nextsense – Revenue brought forward on year of acquisition. Receivables skyrocket. Negative growth to 2020s.
- Licom Systems – Undisclosed/poorly disclosed acquisition. Presumably another autonomous vehicle fad acquisition which has gone nowhere.
- ProCam – Distributor of CAD/CAM solutions
- Geosurf Corporation – Software developer for Japanese machine control construction solution
- AGTEK Development – US software developer for planning and productivity software solutions in civil construction.

2018 Acquisition Analysis	**EUR m**
Acquisition consideration	555
Less: cash acquired	(10)
Net acquisition spend	545
2017 Revenue	3,448
*add: Acquired revenue**	*103*
2018 Revenue (estimate)	**3,551**
2018 Revenue (actual)	3,761
Delta (organic growth)**	**209**
Revenue (MAX)	103
Multiple	5

2018 Revenue Multiple Analysis	
Multiple	3
2017 Revenue	3,448
*add: Acquired revenue**	*182*
2018 Revenue (estimate)	**3,630**
2018 Revenue (actual)	3,761
Delta (organic growth)**	**131**

Hexagon 2018 Acquisitions	Revenue (MAX)
Bricsys NV	16
Guardvant, Inc.	N/A
External-Array Software (Beijing), Inc.	N/A
Spring Technologies SAS	8
LSE	N/A
PipingDesignOnline.com	N/A
AutonomouStuff LLC	51
NEXTSENSE GmbH	12
Licom Systems GmbH	16
ProCAM Group Srl	N/A
Geosurf Corporation	N/A
AGTEK Development Co., Inc.	N/A
Total acquired revenue	**103**

Figure 81 – Viceroy Analysis: Sourced from Hexagon annual report 2018 & local company filings

** Where available. We note that not all acquisitions are disclosed. Not adjusted for intra-group sales.*

*** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

Note: Purple flags denote distributors. Many are immediately dissolved and merged into Hexagon umbrella entities.

2019

- Volume Graphics – Industrial computed tomography (**ICT**) software.
- Melown Technologies – Developer of advanced visualization technology for creating 3D models. Estimated revenues estimated from 30 receivable days (working capital efficiency).
- Amendate – Appears to have been acquired only a few months after it was established.
- Thermopylae Sciences & Technology – Geospatial applications, primary US Government & defense focus.
- Split Engineering – Rock measurement systems.
- Aciel Geomatics – Leica distributor in South Africa.
- J5-International – acquired out of long liquidation. Noted by Hexagon as a “market leader” in operations management software.
- Etalon – Huge receivables jump. More consistent with bringing forward revenues.

2019 Acquisition Analysis	**EUR m**
Acquisition consideration	555
Less: cash acquired	(10)
Net acquisition spend	545
2017 Revenue	3,761
*add: Acquired revenue**	*117*
2018 Revenue (estimate)	**3,877**
2018 Revenue (actual)	3,761
Delta (organic growth)**	**(117)**
Revenue (MAX)	117
Multiple	5

2019 Revenue Multiple Analysis	
Multiple	3
2018 Revenue	3,761
*add: Acquired revenue**	*119*
2019 Revenue (estimate)	**3,879**
2019 Revenue (actual)	3,908
Delta (organic growth)**	**28**

Hexagon 2019 Acquisitions	**Revenue (MAX)**
Volume Graphics GmbH	26
Melown Technologies SE	26
AMendate GmbH	N/A
Thermopylae Sciences & Technology LLC	43
Split Engineering	N/A
Aciel Geomatics	N/A
J5- International Ltd.	N/A
ETALON AG	24
Total acquired revenue	**118**

Figure 82 – Viceroy Analysis: Sourced from Hexagon annual report 2019 & local company filings

** Where available. We note that not all acquisitions are disclosed. Not adjusted for intra-group sales.*

*** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

Note: Purple flags denote distributors. Many are immediately dissolved and merged into Hexagon umbrella entities.

2020

- OxBlue – Construction visualization security.
- CodeCad – Distributor of Hexagon CADworx
- PAS Global – cybersecurity and integrity software. Dissolved 2 years after acquisition.
- D.P. Technology – CAM developer.
- Mde Network – Distributor of J5 in Argentina (?).
- Tacticaware – LIDAR & 3D surveillance software developer.
- CAEfatigue – mechanical fatigue simulation solution developer. Revenues down on acquisition.
- Romax Technology – CAE software.
- Cowi A/S Aerial Mapping Business – Partner program of Hexagon for aerial mapping processing
- Alas Ing – Distributor of Hexagon PPM
- Blast Movement Technologies – Tracks blast movement in mining applications.
- Geopraevent AG – Natural hazard monitoring & alarms

2020 Acquisition Analysis	**EUR m**
Acquisition consideration	860
Less: cash acquired	(35)
Net acquisition spend	825
2019 Revenue	3,761
*add: Acquired revenue**	*171*
2020 Revenue (estimate)	**3,932**
2020 Revenue (actual)	3,764
Delta (organic growth)**	**(167)**
Revenue (MAX)	171
Multiple	5

2020 Revenue Multiple Analysis	
Multiple	3
2019 Revenue	3,908
*add: Acquired revenue**	*275*
2020 Revenue (estimate)	**4,183**
2020 Revenue (actual)	3,764
Delta (organic growth)**	**(418)**

Hexagon 2020 Acquisitions	Revenue (MAX)
OxBlue Corp.	37
CodeCad, Inc.	N/A
PAS Global LLC	34
D.P. Technology Corp.	35
Mde Network SRL	N/A
TACTICAWARE sro	2
CAEfatigue Ltd.	1
Romax Technology Ltd.	27
Cowi A/S /Aerial Mapping Bus/	14
Alas Ing S.A.	N/A
Blast Movement Technologies Pty Ltd.	21
Geopraevent AG	N/A
Total acquired revenue	**171**

Figure 83 – Viceroy Analysis: Sourced from Hexagon annual report 2020 & local company filings

** Where available. We note that not all acquisitions are disclosed. Not adjusted for intra-group sales.*

*** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

Note: Purple flags denote distributors. Many are immediately dissolved and merged into Hexagon umbrella entities.

2021

- Atlas RFID Holdings' Jovix – RFID tracking software. Appears novel.
- Wuhan Zhongguan Automation Technology / ZG Tech – May be the same company, poor Hexagon disclosures. Both specialize in 3D data acquisition.
- Immersal Oy – Spatial mapping and visual positioning tech. Revenues fall 2022.
- Infor EAM business – "best in class" (it's not) EAM solution. These are standardized to death. Materially missed revenue estimates announced on acquisition.
- CADLM – A purported "AI" CAE solution. This is likely garbage fad opportunism. You can count legitimate AI operators on one hand. This is a sophisticated (or not) algorithm.
- MECADAT – Distributor.

2021 Acquisition Analysis	**EUR m**
Acquisition consideration	2,589
Less: cash acquired	(5)
Net acquisition spend	2,583
Previous year revenue	3,764
*add: Acquired revenue**	*330*
Estimate end of year revenue	**4,094**
Actual end of year revenue	4,341
Delta (organic growth)**	**247**
Revenue acquired (MAX)	330
Multiple	7.9

2021 Revenue Multiple Analysis	
Multiple	4
2020 Revenue	3,764
*add: Acquired revenue**	*646*
2021 Revenue (estimate)	**4,410**
2021 Revenue (actual)	4,341
Delta (organic growth)**	**(69)**

Hexagon 2021 Acquisitions	**Revenue (MAX)**
Atlas Rfid Holdings, Inc. /Services Business/ (jovix)	N/A
Wuhan Zhongguan Automation Technology Co. Lt	58
Immersal Oy	37
Infor, Inc. /Enterprise Asset Management Business	151
CADLM SAS	N/A
ZGTech	N/A
MECADAT AG	84
Total acquired revenue	**330**

Figure 84 – Viceroy Analysis: Sourced from Hexagon annual report 2021 & local company filings

** Where available. We note that not all acquisitions are disclosed. Not adjusted for intra-group sales.*

*** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

Note: Purple flags denote distributors. Many are immediately dissolved and merged into Hexagon umbrella entities.

2022

Hexagon really begin juicing the shit out of AI.

- Avvir – "AI" powered BIM / SaaS based construction progress monitoring solution. It is not AI.
- iConstruct – Construction automation solutions.
- Men At Work – Distributor of Hexagon VISI CAD CAM software
- TST Tooling – Distributor of Hexagon VISI CAD CAM software
- Vero Solutions – Distributor of Hexagon VISI CAD CAM software
- Innovatia Accelerator – "expedite the digital transformation of paper-based, high risk operational procedures & work process." Sounds like a staple cloud paperless project management tool.
- ETQ – AI & machine learning driven data management. Doubt it.
- CIM3 – Distributor of Hexagon ESPRIT software
- Kasi – Aerial surveying. Undifferentiated, labor-intensive service.
- PDSA – Leica Geosystems distributor.
- Minnovare – Drill data service "faster and more accurate than ever before". Doubt it.

2022 Acquisition Analysis	EUR m
Acquisition consideration	1,252
Less: cash acquired	(22)
Net acquisition spend	1,230
Previous year revenue	4,341
add: Acquired revenue	*75*
Estimate end of year revenue	**4,416**
Actual end of year revenue	5,161
Delta (organic growth)	**744**
Revenue (MAX)	75
Multiple	16

2022 Revenue Multiple Analysis	Base
Multiple	4
2021 Revenue	4,341
add: Acquired revenue	*308*
Estimate end of year revenue	**4,649**
Actual end of year revenue	5,161
Delta (organic growth)	**512**

Hexagon 2022 Acquisitions	Revenue (MAX)
Avvir, Inc.	N/A
iConstruct (Aus) Pty Ltd.	N/A
Men At Work GmbH	N/A
TST Tooling Software Technology LLC	N/A
Vero Solutions SRL	N/A
Innovatia Accelerator, Inc.	N/A
ETQ LLC	75
CIM3	N/A
Kasi Aviation	N/A
PDSA Company LTD	N/A
Minnovare Pty Ltd.	N/A
Total acquired revenue	**75**

Figure 85 – Viceroy Analysis: Sourced from Hexagon annual report 2021 & local company filings

** Where available. We note that not all acquisitions are disclosed. Not adjusted for intra-group sales.*

*** We note that our estimated growth figures are not adjusted for acquisition timing, thus the Delta (organic growth) estimates on yearly summaries will be over/understated. As we have assessed every period to 2025, these variances will smooth to unmaterial amounts on aggregate. (i.e. an understated delta in year 1 will lead to an overstated delta in year 2, self-correcting in aggregate).*

Note: Purple flags denote distributors. Many are immediately dissolved and merged into Hexagon umbrella entities.

Annexure 4 – Ola Rollén Insider Trading Investigation

Ola Rollén - a SWEDISH national - was charged with insider trading in the shares of Next Biometrics, a NORWEGIAN listed maker of fingerprint sensors. Rollén's personal investment vehicle (with some minority interests), Iskossala, purchased the shares of Next on 5-7 October 2015[31], during which time he attended a private meeting with the company's CEO[32].

On October 6th & 7th Rollén's own private investment vehicle Iskossala Ltd purchased 284k shares of Next - apparently on behalf of Greenbridge Ltd, a Luxembourg entity.

Rollén and Schörling had agreed to set up an investment vehicle separate from Hexagon called Greenbridge Ltd. in early 2015. This vehicle did not become fully operational until January 2016, when Iskossala transferred the shares of Next to Greenbridge at cost.

Rollén also tried and failed to purchase 950k shares of Next for himself but was unsuccessful. It also appears that Iskossala/Greenbridge then subsequently subscribed to a rights issue of 2n shares in Next at a higher price.

On Oct 8th Rollén's interests were publicized and the Next shares jumped 83% in the midst of a royalty deal between Next and Ngoc Minh Dinh, another major owner of Next. Later in October it was revealed Dell was to become a new customer of Next.

Norwegian prosecutors alleged that Rollén knew the following when he purchased shares in Next via Iskossala:

- Next Biometrics' rights issue would take place a few days after he purchases the shares.
- Greenbridge Ltd planned to buy shares from Ngoc Minh Dinh (a large investor in Next Biometrics)
- Next Biometrics would close a royalty deal with Ngoc Minh Dinh.
- Next Biometrics planned to present a new customer, namely Dell.

Rollén's defense team argued

- he was not aware of the four allegations
- even if he was aware(!) it would not be enough grounds to prove him guilty since reasonable investors would not have attached importance to this information.
- Furthermore, one of Rollén's explanations for his transactions was his confidence in Next Biometrics' fingerprint sensor technology as he expected them to experience an explosive growth.

This seems like a pretty spurious set of arguments.

Moreover, while all the focus was on Rollén here the general activity here doesn't reflect well on Schörling either given he was also a partner/co-investor in the vehicle that the CEO flipped his shares to in the insider trading case.

Rollén was ultimately acquitted in 2019, and launched a media campaign to claim that he was tried for insider trading due to 'abuse' of a share price increases entirely created by his investments and good name. This included the website www.olarollentruth.com, which now redirects to Ola's personal LinkedinPage.

- **A case of mistaken identity was the root cause for the authorities pressing charges against Ola Rollén in the first place.**
  (source: unanimous acquittal verdict, page 4)
- **This case is about a share price increase created by Ola Rollén's own investments and name.**
  (source: unanimous acquittal verdict, page 30-31)

Figure 86 – extract from olarollentruth.com[33]

[31] https://schnitgercorp.com/2016/11/07/quickie-ola-rollen-back-ceo-hexagon/
[32] https://lup.lub.lu.se/luur/download?func=downloadFile&recordOId=8970758&fileOId=8970759
[33] https://web.archive.org/web/20221127152006/https://olarollentruth.com/news/

In other words, Rollén (sourcing the court) claims that the sudden jump of Next share value immediately after his investment was due to his investment, and not for lucrative operational deals signed by Next in the same period. This is bizarre.

After enjoying 83% gains, Next Biometrics fell flat on its face. It has fallen >95% from all time highs. Rollén's explanation for his transactions was his confidence in Next Biometrics' fingerprint sensor technology as he expected them to experience an explosive growth. This was a total fad.

Annexure 5 - The Curious Case of the Kennedys (…not those Kennedys)

Among the various investors of Greenbridge Super-Secret Slush Fund is **M&V Kennedy Super Account.**

Viceroy's corporate registry searches in Australia, the home of the "Super Account", identified Malcolm Kennedy (presumably of M&V Kennedy Super Account) as the UBO of the **exclusive Leica distributor of Australia**: C.R. Kennedy Geospatial Solutions. This is a big account.

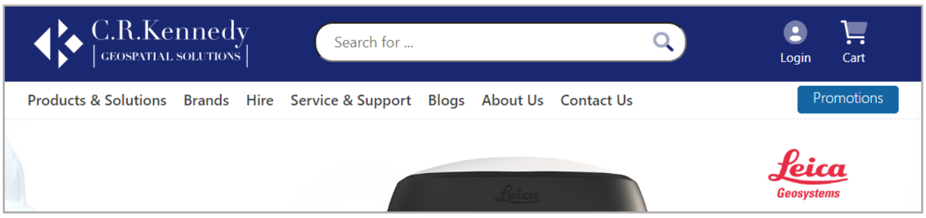

Figure 87 – Divergent Is Valued at Over $1 Billion in Hedosophia-Led Funding[34]

Organisation Details		Document Number
Current Organisation Details		
Name:	C.R. KENNEDY & COMPANY PROPRIETARY LIMITED	0845888A
ACN:	008 458 884	
ABN:	50008458884	
Registered in:	Australian Capital Territory	

Officeholders and Other Roles		Document Number
Director		
Name:	ROBERT BEGGS KENNEDY	023633785
Address:	[redacted]	
Born:		
Appointment date:	21/02/2007	
Name:	MALCOLM STUART KENNEDY	7EBB24133
Address:	[redacted]	
Born:		
Appointment date:	18/10/1974	
Name:	CLEMENT ROBERTSON KENNEDY	7EBB24133
Address:	[redacted]	
Born:		
Appointment date:	21/02/2007	

Figure 88 – C.R. Kennedy & Company Pty Ltd Company Extract

We note that Robert Kennedy, presumably Malcolm Kennedy's son, is the director of Smartnet Aus, a Leica Geosystems owned company with a minority interest from C.R. Kennedy. We cast doubt on Management's ability to conduct business on an arms-length basis in scenarios where the financial interests of both parties are intertwined.

Name: C.R. KENNEDY & COMPANY PROPRIETARY LIMITED
ACN: 008 458 884
Address: 300 Lorimer Street, PORT MELBOURNE VIC 3207

Class	Number held	Beneficially held	Paid	Document number
ORD	150000	yes	FULLY	029002175

Name: LEICA GEOSYSTEMS AG
Org No.: 135 585 278
Address: Heinrich-wild Strasse, Heerbrugg, Ch-9435, Switzerland

Class	Number held	Beneficially held	Paid	Document number
ORD	350000	no	FULLY	029002175

Figure 89 – Smartnet Aus Pty Ltd Company Extract

We ask management to comment on whether the financial interest of distributors often conflict with the financial interests of Hexagon staff and associates of Hexagon management.

[34] https://finance.yahoo.com/news/divergent-valued-over-1-billion-180359851.html