

CRIMSON TIGER GLOBAL CASE COMPETITION

DOMINATING

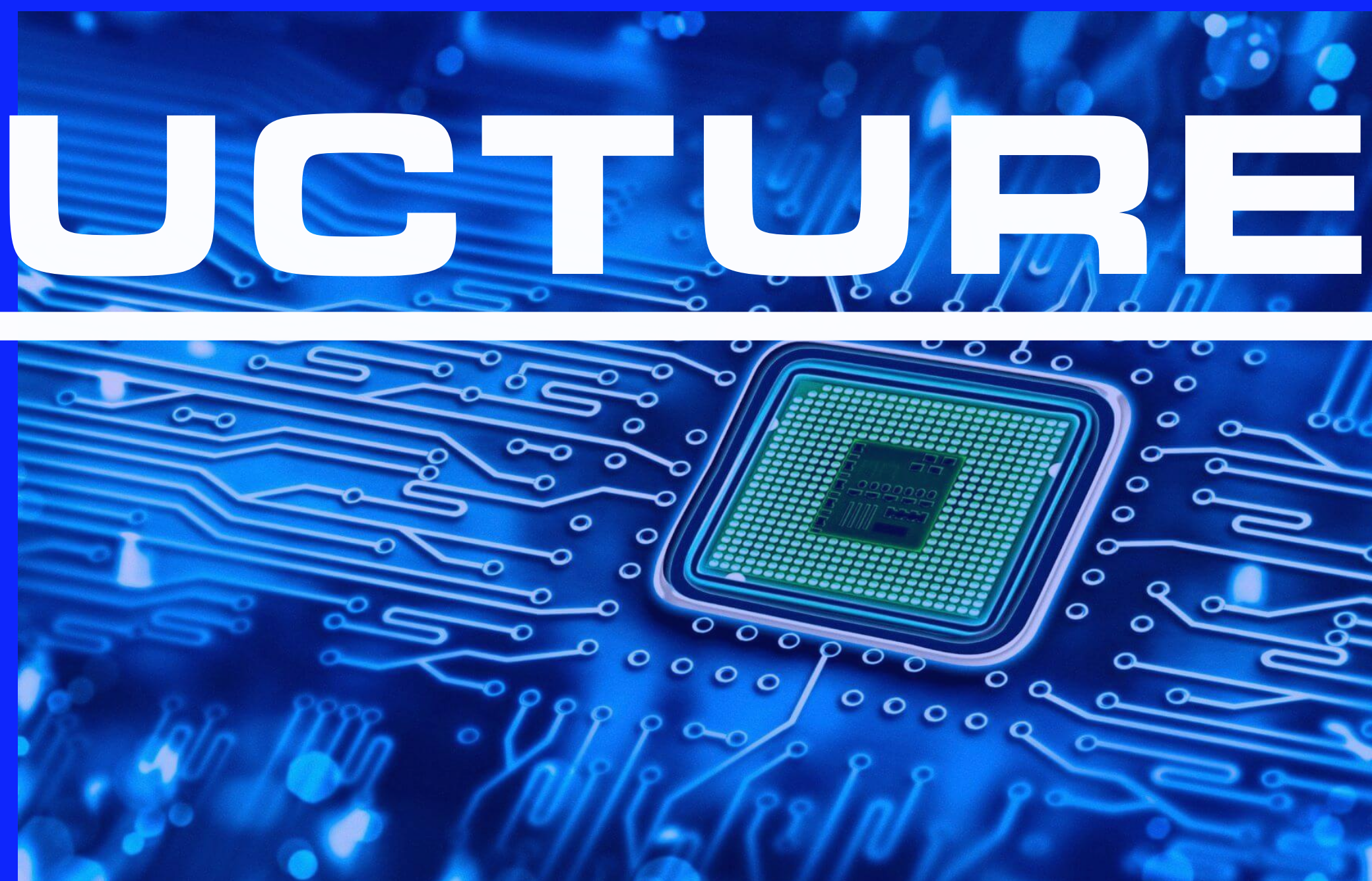
THE

INFRASTRUCTURE

SEGMENT

TEAM: MASTERMIND

RAAJVIR VIJAY / SHAURYA DALMIA



RENESAS

TIGER GLOBAL



Setting the stage
Issue analysis
Recommendations
Implementation
Synthesis

Executive summary

 Objectives	Maximise <i>revenue</i> and <i>cost</i> synergies	Dominate automotive segment, while pioneering 5G tech	Increase global presence and market share
 Issues	Maximise <i>revenue</i> and <i>cost</i> synergies	Single thread organizations dominate markets	Emerging markets need lower priced products
 Question	What company should Renesas merge with or acquire such that revenue and cost synergies are maximised? What company should Renesas merge with or acquire such that it complements Renesas and its recently acquired companies? What company should Renesas merge with or acquire such that it can climb to the top of the markets it serves?		
 Recommendation	Acquisition of NEC Corporation to accelerate development of upcoming embedded solutions, expand the infrastructure segment and be the pioneer for 5G solutions.		
 Impact	4x increase in yearly gross revenue	280% increase in yearly earnings	5x growth of sales in infrastructure market

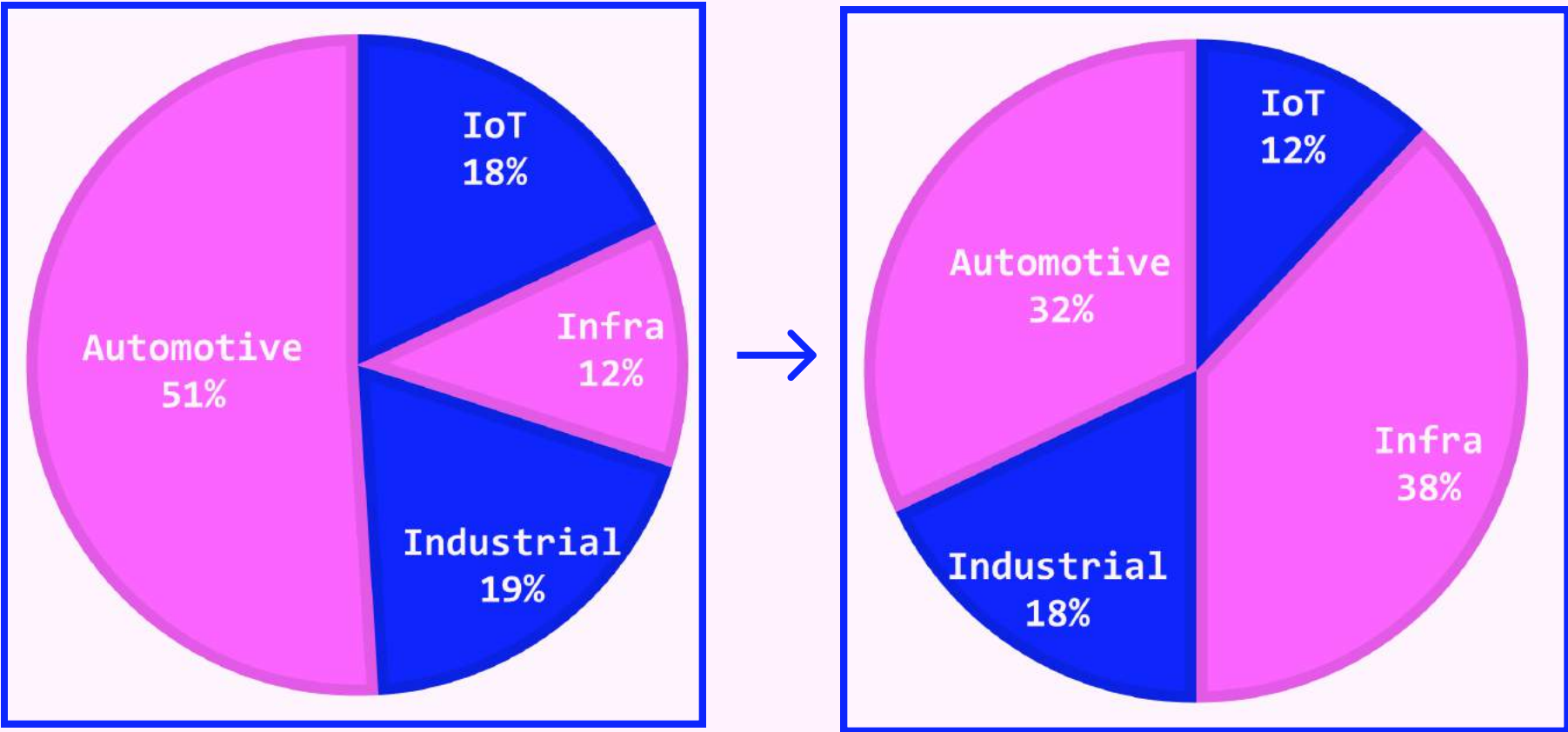
Issues and Objectives

DIVERSIFICATION

- Goal: increase percentage of sales of products in Power and SoC segments. Decrease reliance on sales from automotive segment by ramping up sales in the IoT, Infrastructure and Industrial markets.
- Retain best Talent, Market share, and Products as much as possible.
- *Spread out buyers and business all over the world.* Current main buyers are mostly from Japan(Tokuyakuten), goal is to get buyers from USA and Europe.
- Maximise *Cost synergies* and *Revenue Synergies*.

COMMON THREAD

- *Innovation, Reliability and Stickiness*—most important aspects.
- Goal: Increase operating and gross margins for ABU and IIBU segments by at least 7% and 10% respectively.



LEAD MARKET

- Renesas already is the market leader in MCUs, and have about 2-3 years advantage over competitors.
- Goal: Efficiently shift focus to *IoT and Infrastructure* markets, while keeping MCU crown.

MCU			
Rank		(M\$)	
2020	Company Name	2020	Share
1	Renesas Electronics	2,980	17.0%
1	NXP	2,980	17.0%
3	STMicroelectronics	2,506	14.3%
4	Microchip Technology	2,448	14.0%
5	Infineon Technologies	2,217	12.7%
6	Texas Instruments	1,384	7.9%
7	Samsung Electronics	251	1.4%
8	Cypress Semiconductor	215	1.2%
9	Toshiba	210	1.2%

GROWTH

- Maximise *shareholder value*
- *Offensive growth*, reduction in fixed costs and increase in operational margins.

Possible Recommendations

Acquiring *Synaptics*

- Predicted to lose major customers.
- Produces outdated solutions (LCD drivers when OLED is future).

Acquiring *Silicon Labs*

- Massive intellectual, product capital inheritance.
- Offer large-scale expansion into IoT segment.
- Orders from Shangai Berry, Alcara and Boundary.
- Undoes what Renesas has been investing on by increasing automotive dependency.

Merging with *MediaTek*

- Major orders from mid-range. smartphone leaders such as Oneplus, Vivo and smart home device makers such as Amazon.
- Entry into massive emerging markets - India and China.

Acquiring *LG Display*

- Entry into display segment.
- Major orders from Apple, LG, and others.
- Set for growth as more smartphone manufacturers switch to OLED.
- Risk of loss of intellectual capital, or culture clash.
- No synergies created as its a different segment.

CANDIDATES

CANDIDATES

Acquiring *MaxLinear*

- Brings in intellectual property and large product line for expanding SoC and RF makets.
- Will expand analog product line.
- Brings orders from Disney, Time Warner and HP.
- Analog is phasing out.

Merging with *Microchip*

- Brings in a huge number of orders.
- Brings in huge revenue and cost synergies.
- Expands into the US market.
- Pioneer in embedded systems.

Acquiring *NEC*

- Specializes on embedded solution.
- Will help bring Renesas to the top of the embedded systems market.
- Similar work culture, high retainability of key people who will accelerate growth.
- Huge revenue and cost synergies as it is .

Merging with *TSMC*

- Most advanced manufacturing facility.
- Brings customers such as Apple, AMD and NVIDIA.
- Taiwan government prevents relations.
- Geopolitical risks - flashpoint for military and economic tensions between USA and China.

After exhausting all possible recommendations, three remain. *Anaylsis next slides*

Merge with *Microchip*

Setting the stage

Issue analysis

Recommendations

Implementation

Synthesis

Overview

Develops embedded control applications. Designs and produces microcontrollers, microprocessors, analog devices, safety, security, and connectivity devices.

The company mainly serves the automotive segment, with industrial and consumer solutions.

Advantages to Renesas

Working together, Renesas and Microchip can make cost and revenue synergies by eliminating redundancies.

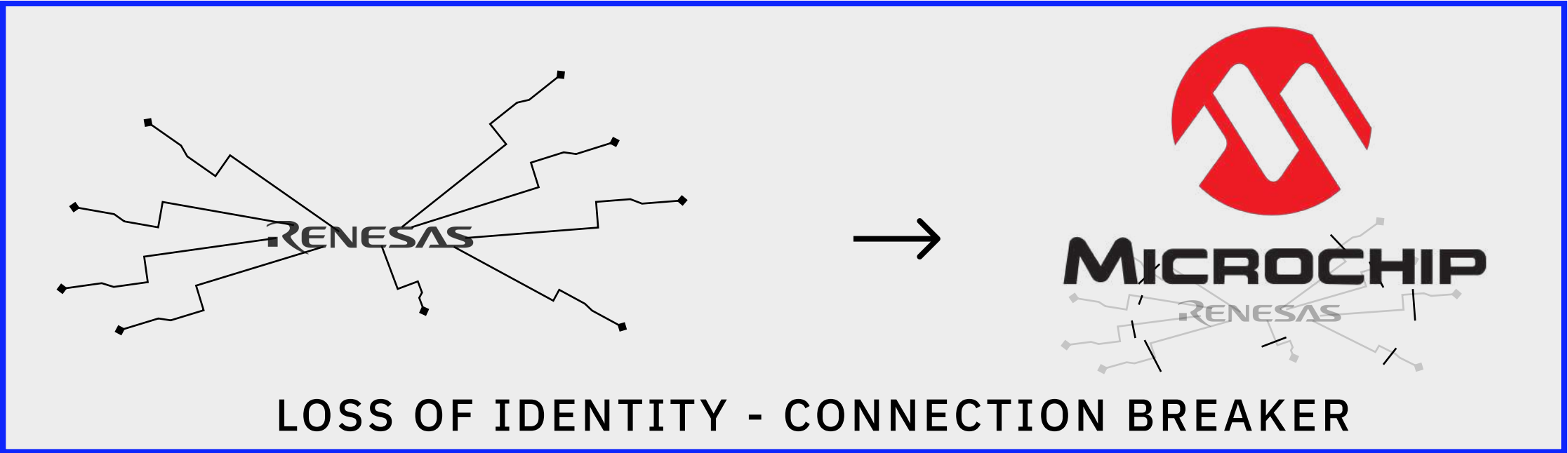
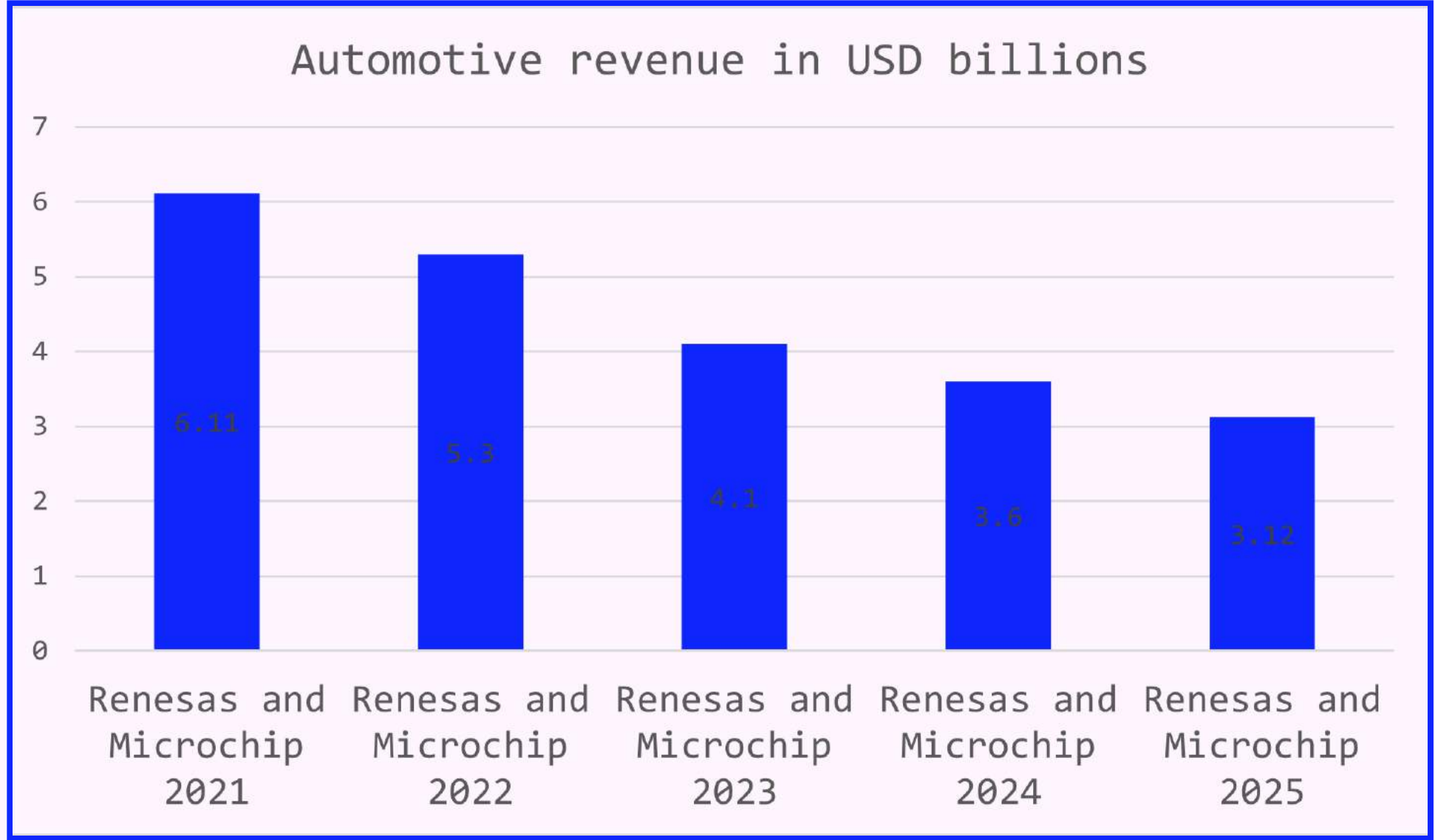
Renesas and Microchip, as they are in similar markets—both have ~50% of sales in the MCU product line—can intergrate efficiently.

Why this is not the best option

Microchip, worth \$50 billion will get to make the terms of the merger. *Most likely result will be dissolution of Renesas, and therefore a loss of identity.*

Going deeper into automotive segment is increasing dependence on one segment.

With the pandemic not subsiding until 2025, according to experts, automotive demands will slowly decrease, leading to large losses.



Merge with *Mediatek*

Overview

MediaTek is a **fabless** semiconductor company. It specializes in developing **systems-on-chip (SoC) for mobile devices**, home entertainment, network and connectivity, automated driving, and **IoT**.

Key supplier for *Amazon Echo devices, OPPO, VIVO and Oneplus phones*, chromebooks, tablets, wifi routers, and 5G systems.

Advantages to Renesas

Mediatek focuses on SoC and mobile chip development. Allying with Renesas, whose key market is the automotive and analog systems, Mediatek and Renesas can each diversify and expand into the other's markets and products.

Why this is not the best option

The two companies are in significantly different fields and geographical regions. Could lead to a lack of communications, potential failure to capture synergies, and intergration shortfalls.

Mediatek, being the larger of the two will get to make the terms of the merger, most likely leading to the dissolution of Renesas, and loss of identity.

Tawan government is very protective of its firms, possibly choking relations.



Acquire NEC

Key Strategy

Diversifying by increasing market share in **infrastructure segment**.

Pioneering 5G development, while simultaneously perfecting embedded solutions for customers.

Only way to survive the inevitable automotive demand crash.

Impacts

- 1. Diversification & reduction of risks
- 2. Increase in revenue and operating profits
- 3. Market leader in Automotive and Infrastructure
- 4. Retainability of key people—no culture clash
- 5. New customers like Dell, Cisco, Microsoft
- 6. Grow globally—presence in USA

Numbers



49%
reduction in losses



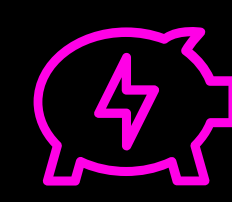
\$38 billion
revenue synergy



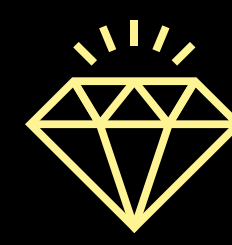
560%
*growth in infrastructure**



287%
*increase in earnings***



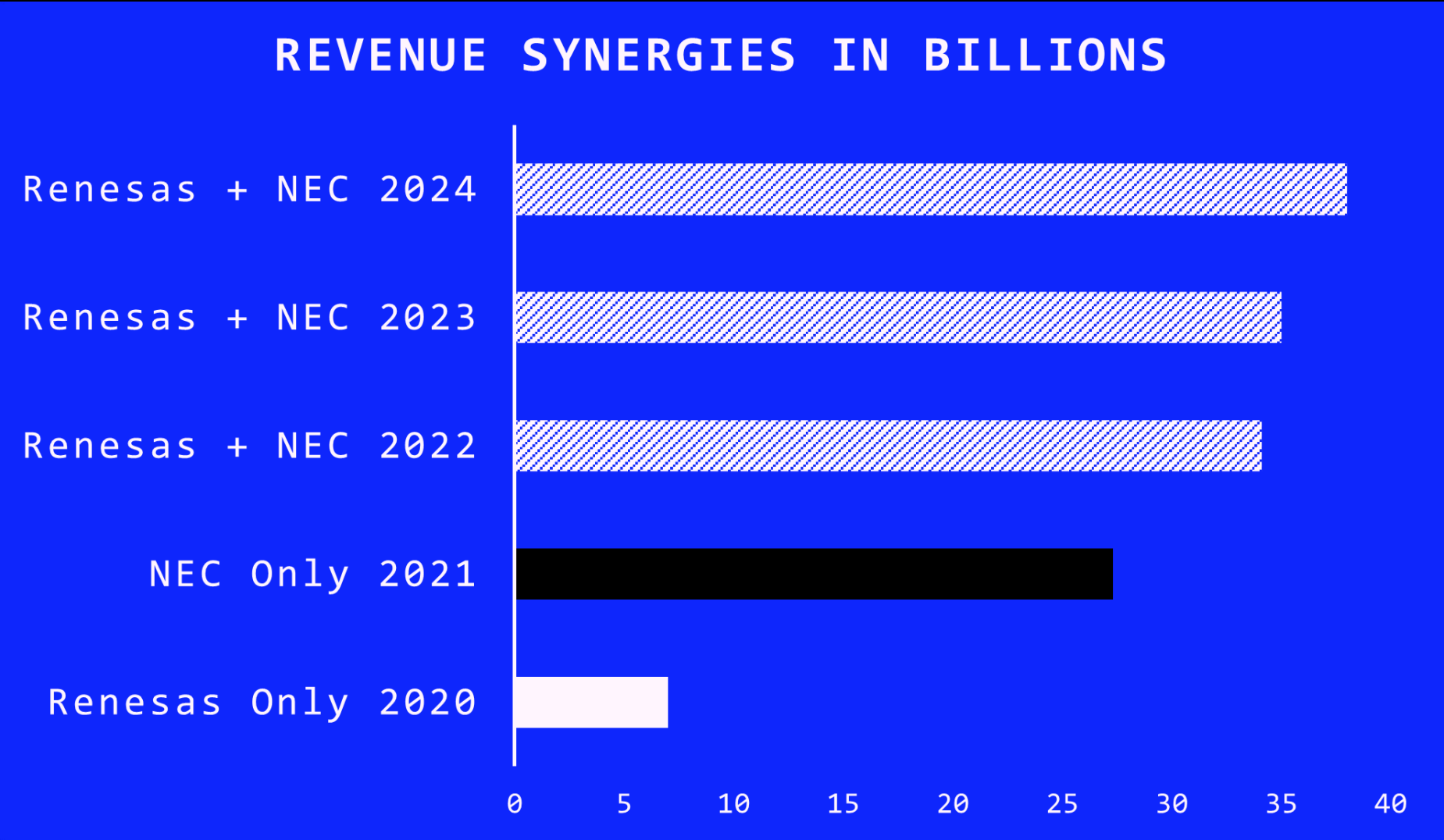
77%
*cost synergy****



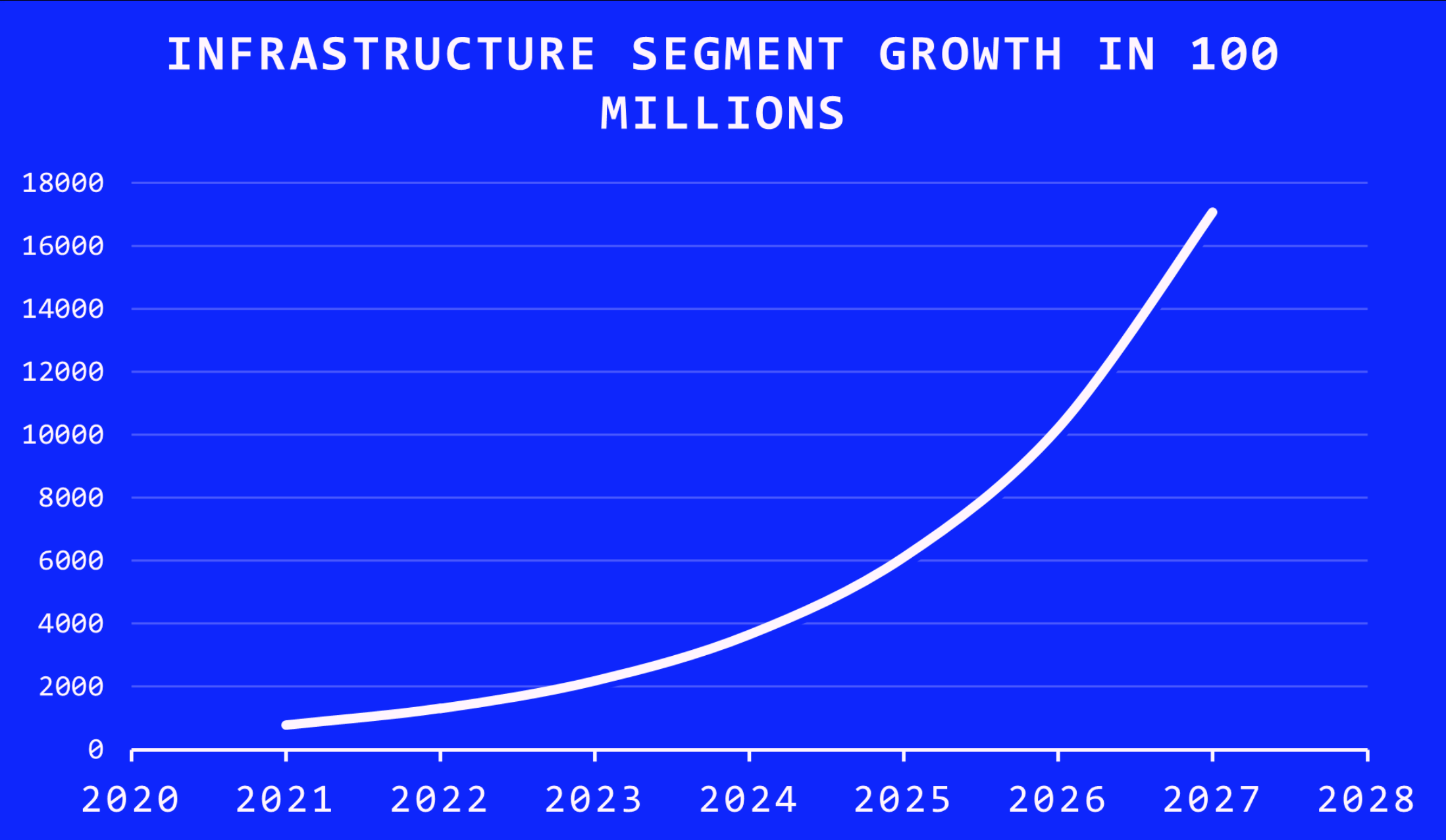
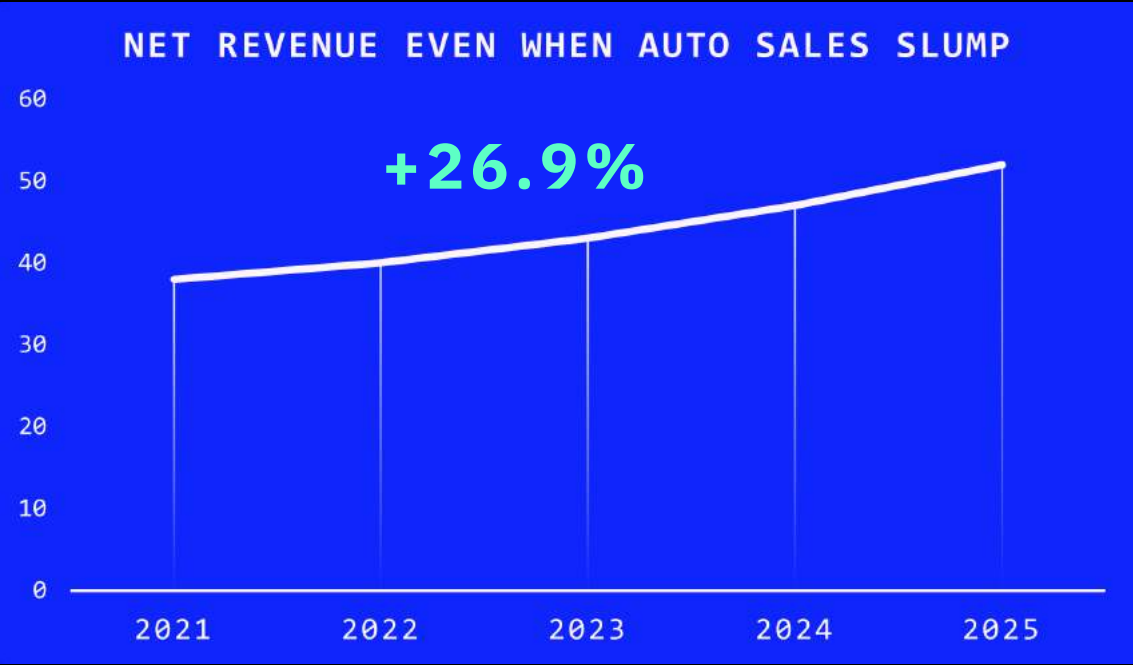
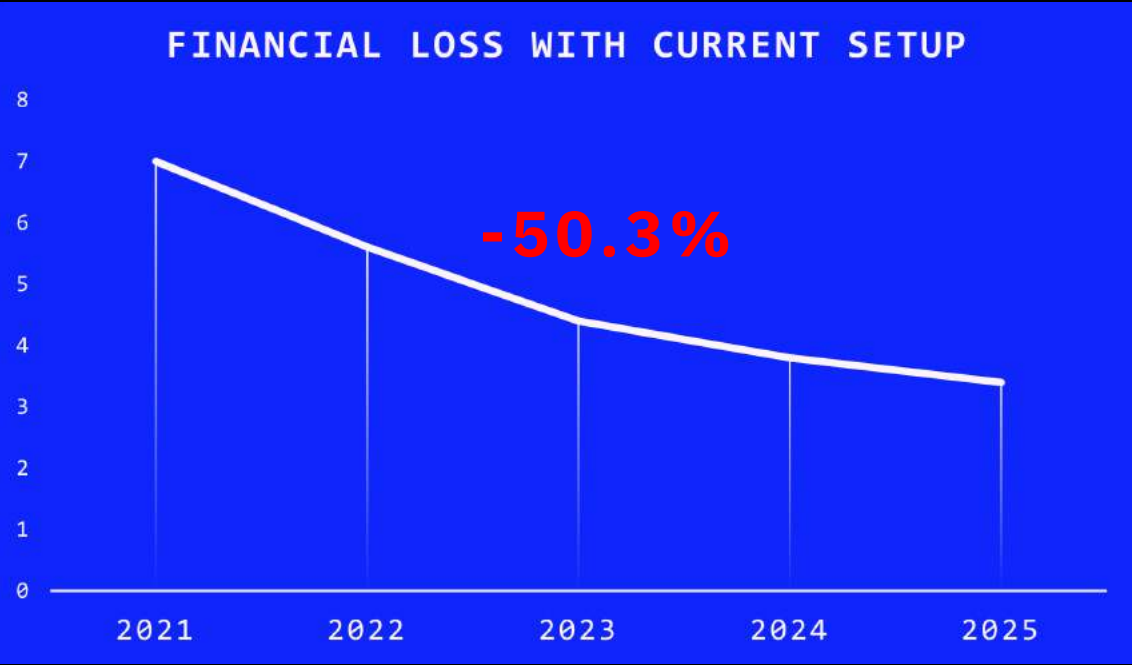
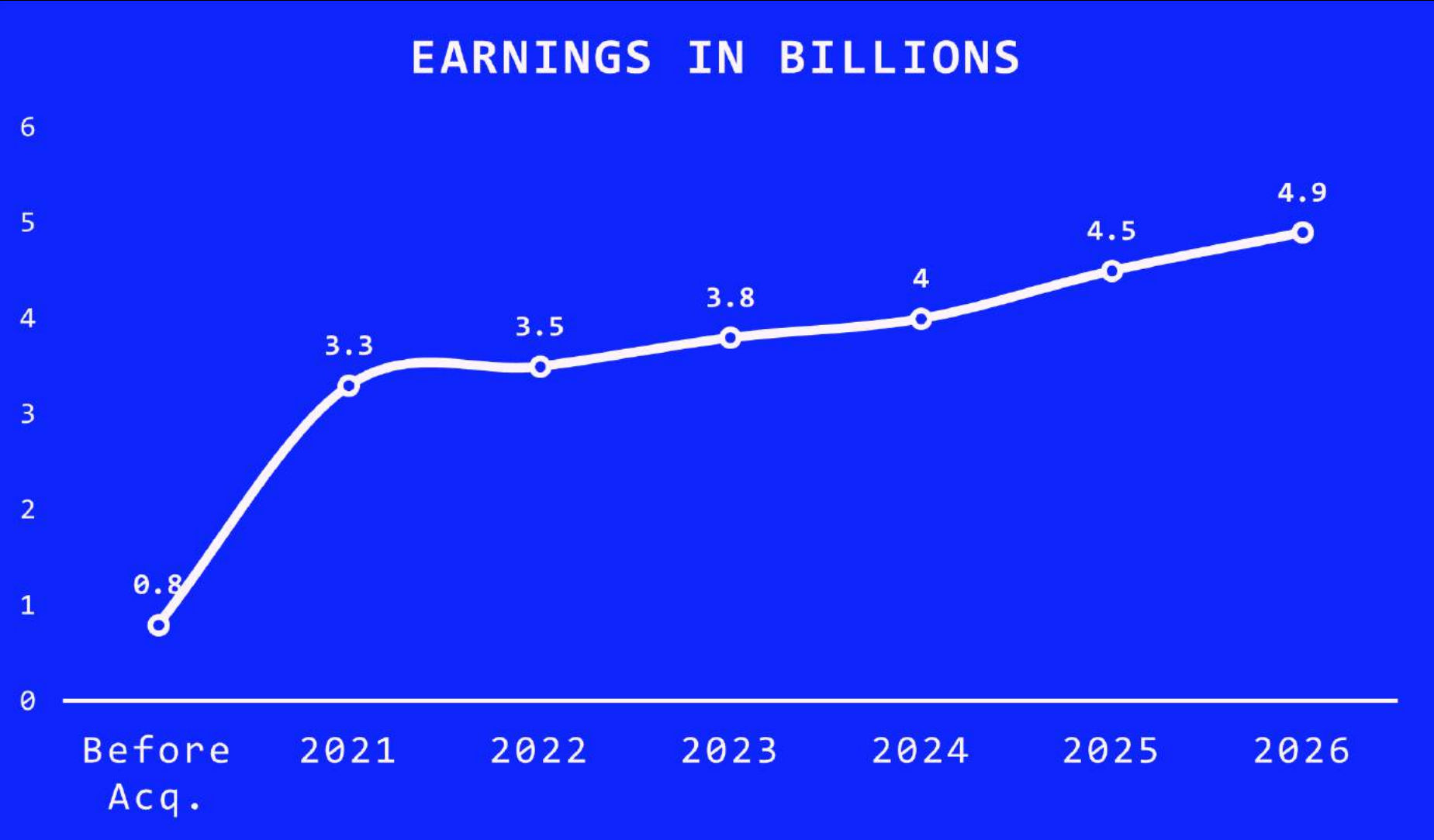
\$29.3 billion
*net present value*****

*-Average historical growth for semiconductor mergers, **-CAPR of 5G infrastructure is 67.1%. Calculated with present value of infrastructure segment, ***-Average cost synergy for semiconductor companies, ****-See next slide.

Sources: TGCC Case report, statista.com, companiesmarketcap.com, craft.co, Accenture, Investopedia



NPV = \$29.231B in 5 years with 10% discount rate.



Note: NEC Corporation’s standalone market cap is 13.89B, revenue \$27.46B, and earnings \$1.52B.

All annual revenues and earnings data are from <https://companiesmarketcap.com/>.

Mitigating risks

- Massive revenue synergies
- Massive cost synergies
- Improved market position
- Increased product line
- Better R&D
- Diversification and risk

Strengths

Opportunities

- Access to new and upcoming market
- Potential for exponential growth in 5G
- Larger assets base
- Tax benefits

Risk-Mitigation

- Ensuring sufficient R&D for 5G development
- Ensuring identity of both companies to retain buyers
- Allocating finances for Automotive development to lead MCU market

- Lower gross and operating margins
 - Financial instability
- Taiwan government interference

Weaknesses

Threats

- Enhanced regulatory interference
 - Retention of employees
 - Retention of customers

Synthesis

Objectives

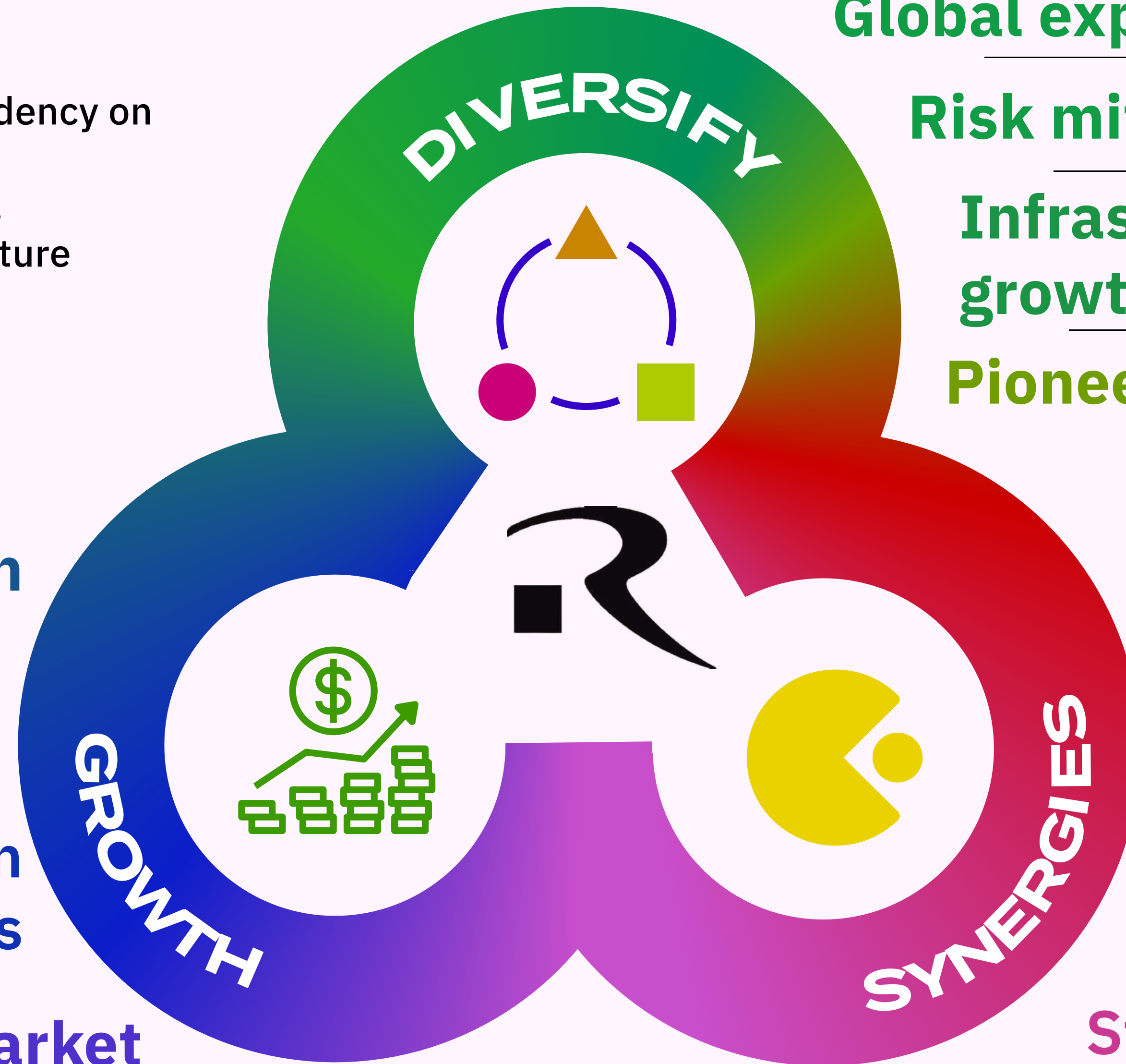
- Diversifying to decrease dependency on automotive segment.
- Increase revenue and earnings.
- Lead automotive and infrastructure markets.
- Grow globally.

5x Revenue growth

Consistent earnings and growth—accretive

Higher market share in both segments

Entry to upcoming market



Global expansion

Risk mitigation

Infrastructure segment growth

Pioneering 5G

77% Cost synergy

Perfect culture fit

Stickiness

Tax inversion

GRATITUDE

Thank you Renesas Corporation, for making TGCC 2021 possible. Thank you for your incredible case.

Thank you Mr. Taizo Endo for your incredible presentation—it was key to my understanding of Renesas as a company, its goals and what it wants to achieve by acquiring another company.

Thank you Crimson Education and Tiger Global for hosting such an amazing case competition. It was truly an exhilarating and very enlightening, eye-opening experience.

Thank you Ahad Khot, James Bowe, Janine Manning and all the other incredible speakers for hosting the great webinars and workshops—you really helped me understand what a case competition is, how to attempt to crack it, and how to present it.

Thank you TGCC team for patiently answering my ennumerous queries and emails and trying to assist me in every way possible.

References

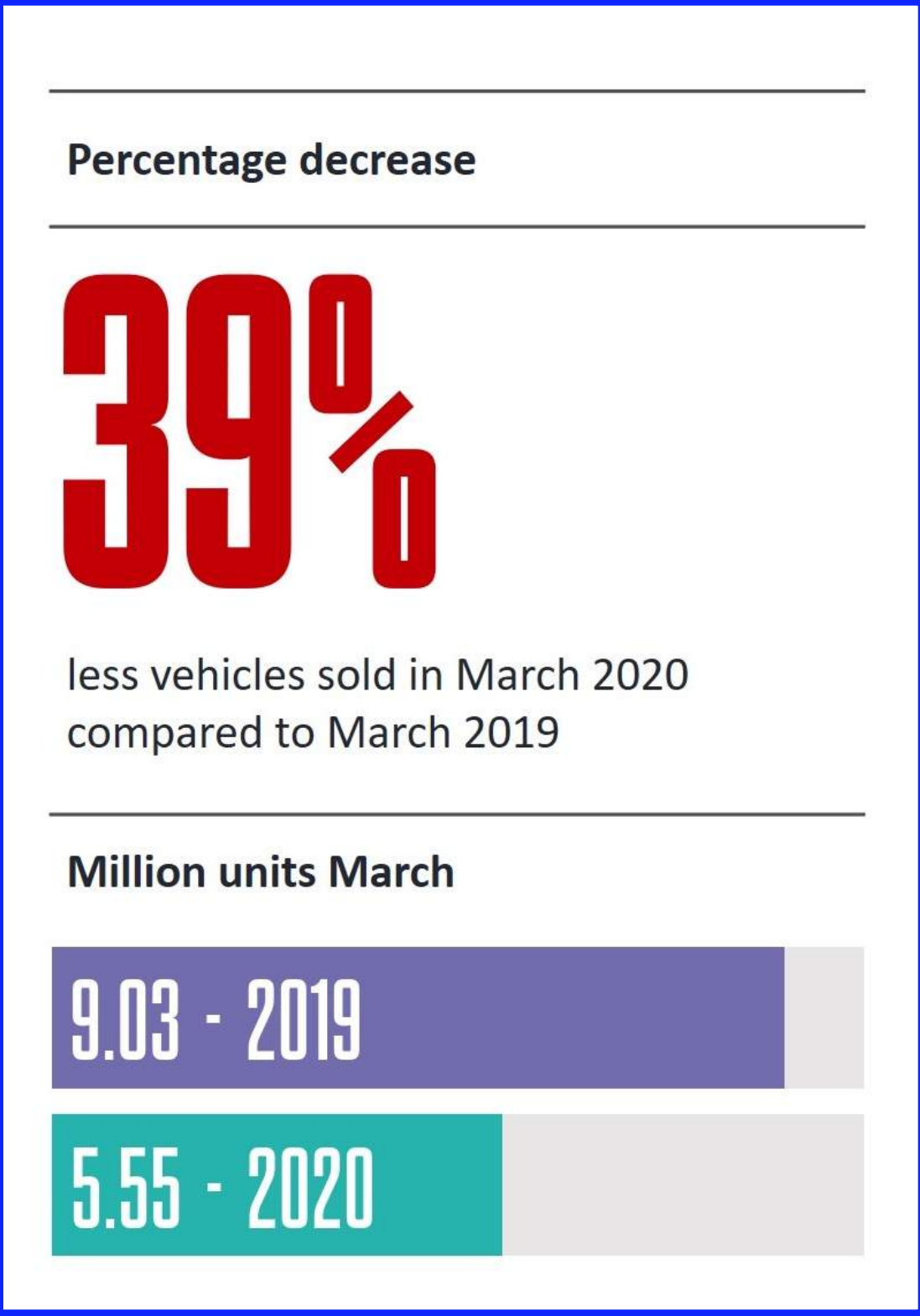
<https://www.emarketer.com/>
<https://www.renesas.com/>
<https://finance.yahoo.com/>
<https://www.mckinsey.com/>
<https://www.fool.com/>
<https://craft.co/>

<https://www.accenture.com/>
<https://www.statista.com/>
<https://www.cfo.com/>
<https://dealroom.net/>
<https://www.forbes.com/>
<https://thenounproject.com/>
<https://www.remove.bg/>
www.nec.com
<https://www.casecomp.org/>
<https://seekingalpha.com/>
<https://investors.maxlinear.com/>
<https://www.figma.com/>

All annual revenues and earnings data are from
<https://companiesmarketcap.com/>

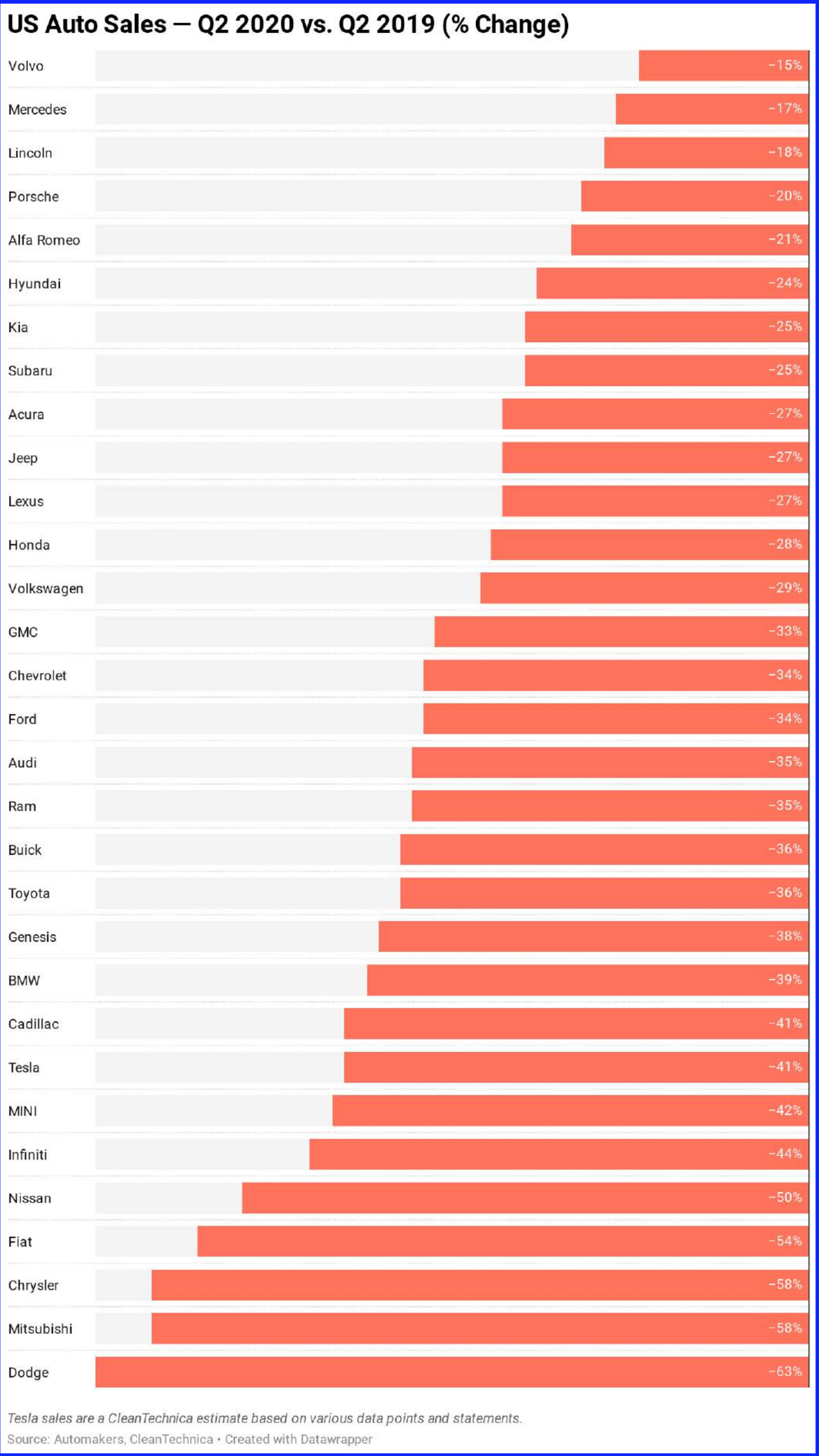
These are clickable links. These are the sites, not necessarily specific webpages from which I have taken data from different pages.

Calculated 20% automotive sales slump for following years



BusinessToday.In			
SALES IN AUGUST 2019			
Category	Aug'18	Aug'19	Growth %
Two Wheelers	19,47,304	15,14,196	-22.24
Passenger Vehicles	2,87,198	1,96,524	-31.57
Three Wheelers	63,199	58,818	-6.93
Commercial Vehicles	84,668	51,897	-38.71
Total Domestic	23,82,436	18,21,490	-23.55
Exports	4,11,341	4,21,107	2.37

Source : SIAM



Sources: https://bsmedia.business-standard.com/_media/bs/img/article/2019-09/10/full/1568055970-8815.jpg,
<https://cleantechnica.com/2021/01/16/us-auto-sales-down-2592185-15-in-2020-tesla-up-9/>,
<https://www.jato.com/wp-content/uploads/2020/04/Chart-1.jpg>

Calculated 67% 5G market growth following years

