



**My learning journey –
10 design criteria for an
Automotive Software company**



Transformation challenge

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ESSAY

Why Software Is Eating The World

By MARC ANDREESSEN

August 20, 2011

This week, Hewlett-Packard (where I am on the board) announced that it is exploring jettisoning its struggling PC business in favor of investing more heavily in software, where it sees better potential for growth. Meanwhile, Google plans to buy up the cellphone handset maker Motorola Mobility. Both moves surprised the tech world. But both moves are also in line with a trend I've observed, one that makes me optimistic about the future growth of the American and world economies, despite the recent turmoil in the stock market.

In short, software is eating the world.

More than 10 years after the peak of the dot-com era, a new wave of Internet companies like Facebook and Google+ are emerging, due to their rapidly growing user bases.



When code is king: Mastering automotive software excellence

February 17, 2020 | Article



Learning journey past 10 years

2012 Digital Bus. & Digitization Volkswagen Group Sales

2014 First Hackathon “Data Driven” @ MIT Media Lab (Boston) incl. Volkswagen Executives

2015 Definition of “Volkswagen Group Mobility Strategy”

2015/2016 Mobility Partnership with City of Hamburg

2016-2019 Founder and CEO @ MOIA

2019/20 VP Company Set-Up @ CARIAD

Since 2020 CEO @ VAIVA



Learning Essence

- **Ten must-have factors to build and run an Automotive Software company (certainly more); from**
 - Different organizational settings (project, business unit, tech company, corporate)
 - Different market & technology maturity (hype) stages
 - Different company maturity stages (foundation, growth, restructuring)
- **Conviction: It's no either or / cherry picking – mid-/long-term; all ten factors must be regarded**
- **Finally, following these design criteria determines company culture and attractiveness for top talent**



1: Setting realistic objectives

- **There is no shortcut for learning, e.g.,**
 - Mobileye 23 years
 - NVIDIA 29 years
 - Waymo 13 years
 - Tesla 19 years
- **To pursue multiple products / business routes (in one entity) from the beginning is recipe for failure**
- **A “follower strategy” is not very promising in software**

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2: Rigid Business Model orientation

- “How will we make money?” – every product decision, acquisition, team growth to be judged against this question
- Look at the company through the eyes of an investor
 - Team (!) & product vision
 - Value/ IP generation
 - Willingness to spend budget
- Principle (!): Continuous optimization from day one (faster, leaner, better)



3: Tough Make-or-buy decisions

- **Basic rule: Very strong arguments needed for “make” when there is opportunity to buy the same**
- **Determining the depth of own value-add) is complex, needs to weight aspects like e.g.,:**
 - Speed - Go to market requirements vs. inhouse experiences, capabilities, and available resources
 - Continuity – Own SW dev that spans different product generations reduces risks in the dev process, and validation requirements
 - Cohesion – Bought-in components are required to integrate with existing codebases, APIs, frameworks, and tools / toolchains
- **Remember: Industrialized solutions incorporate learning and optimization over many years**



4: “Playing the infinite game”

- **Basic rule: There is no “Becoming the best/ greatest in software in 5 years”**
- **Objective rather is to ensure long-term, successful market participation & development**
- **Sticking to the path chosen (after a careful assessment) mid- to long-term is crucial because**
 - Team buy-in & believe
 - Consistent learning/ adapting
 - It will get bumpy anyhow



5: Lean structures, fast decisions

- **Traditional, differentiated org structures and decision bodies are harmful, no need for e.g.,**
 - Strategy departments (corporate, brand, product)
 - Innovation centers
 - Transformation hubs
- **Subsidiarity (decisions to be taken on lowest possible level) is a must – here is the relevant knowledge (e.g., required product substance)**
- **Focus on team productivity & value add, constantly looking for and eliminating “ballast”**



6: Continuous improvement, applied

- **Regular assessments: “Are we on track?” (monthly forecasts, retros, pulse checks)**
- **Constant questioning of everything that does not benefit product and technology development , e.g.,**
 - Meetings/ workshops
 - Internal programs, working groups
 - Processes (e.g., procurement, sign-off rules)
- **Rigid reduction of interfaces/alignment needs in operational day-to-day business**



7: Sworn & diverse leadership team

- **Board & first line must be one team with down-tuned egos (ego culture as key failure source)**
 - Complementary strengths and experiences
 - 'Challenge culture' based on respect and sensitivity
 - Trust (reliability, intimacy, self-orientation)
- **True believers & "Passionists": Commitment for the 'just cause', not just a next career step for 2-3 years**
- **Proven (and broadly accepted) competence and credibility of all leaders (no "top General Mgrs.")**



8: It's an expert game...

- **Focus on (and appropriate selection of) experts across all levels with proven track record and top talents, regarding**
 - Skills
 - Attitude (!)
 - Tech Company experience and ambition
- **To succeed it takes the best system engineers, SW architects, ML experts etc. – not the most**
- **The hundreds and thousands of software & systems engineers that OEM and Tier 1 currently search for do not exist**

9: The right benefits

- **Compensation, benefits and merch are hygiene factors but not decisive for top talent**
- **Career development (e.g., technical / functional career paths, tailored dev plans) is paramount**
- **Performance must be visibly valued and rewarded; top talents expect:**
 - Performance differentiation (e.g., fast-track opportunities, compensation spread)
 - Visibility & acknowledgement/ appraisal
 - Participation in company success (e.g., LTIs, ESOP)





10: Honest communication

- Say what you do, and do what you say – precise and down-to-earth (rather: under-sell and over-achieve)
- (Too) big gaps between external communication and internal reality (perception) must be avoided
- Different target-groups expect very distinct content
 - Employees/ stakeholder (discrete/ believable product vision, proof of a learning organization)
 - Talent market (applied technologies/ tools, work environment)
 - Stock market (realistic objectives, trusted communication of progress)

A woman with long dark hair is seen in profile, looking out of a large window. Outside the window, a city skyline with several tall buildings is visible under a clear blue sky. In the foreground, a silver laptop is open on a light-colored sofa. A person's hand is visible typing on the laptop. The scene is brightly lit, suggesting daytime.

Thank you.

My learning journey – Q&A