

Seeing Around the Corner: SDV in the year 2040



John Ellis

Founder & Managing Director
JTE Consulting, Inc.

SEEING AROUND THE CORNER

SDV IN THE YEAR 2040

October 11, 2023

012:42:02 03/16/2020 DRONE DELIVERY 31°18'26.3"N 31°04'64.2"W





Selection of companies I have worked or am working with



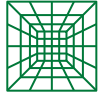
*“Why software is
eating the world”*

– Marc Andreessen

VISIT

<https://a16z.com/2011/08/20/why-software-is-eating-the-world/>

Evolution of Software Defined “things”



SD Radio

- Work started in 1970's
- "SDR" coined in 1995 by Stephen Blust



SD Network

- Work started in 2007
- "SDN" coined in 2009 by Kate Greene



SD Vehicle

- Work started in mid 2000s as SW Defined Car
- "SDV" introduced in 2020 by Marek Neumann

Are you sure you want to push the limits?
This will cause accelerated wear of the
motor, gearbox and battery.

No, I want my Mommy

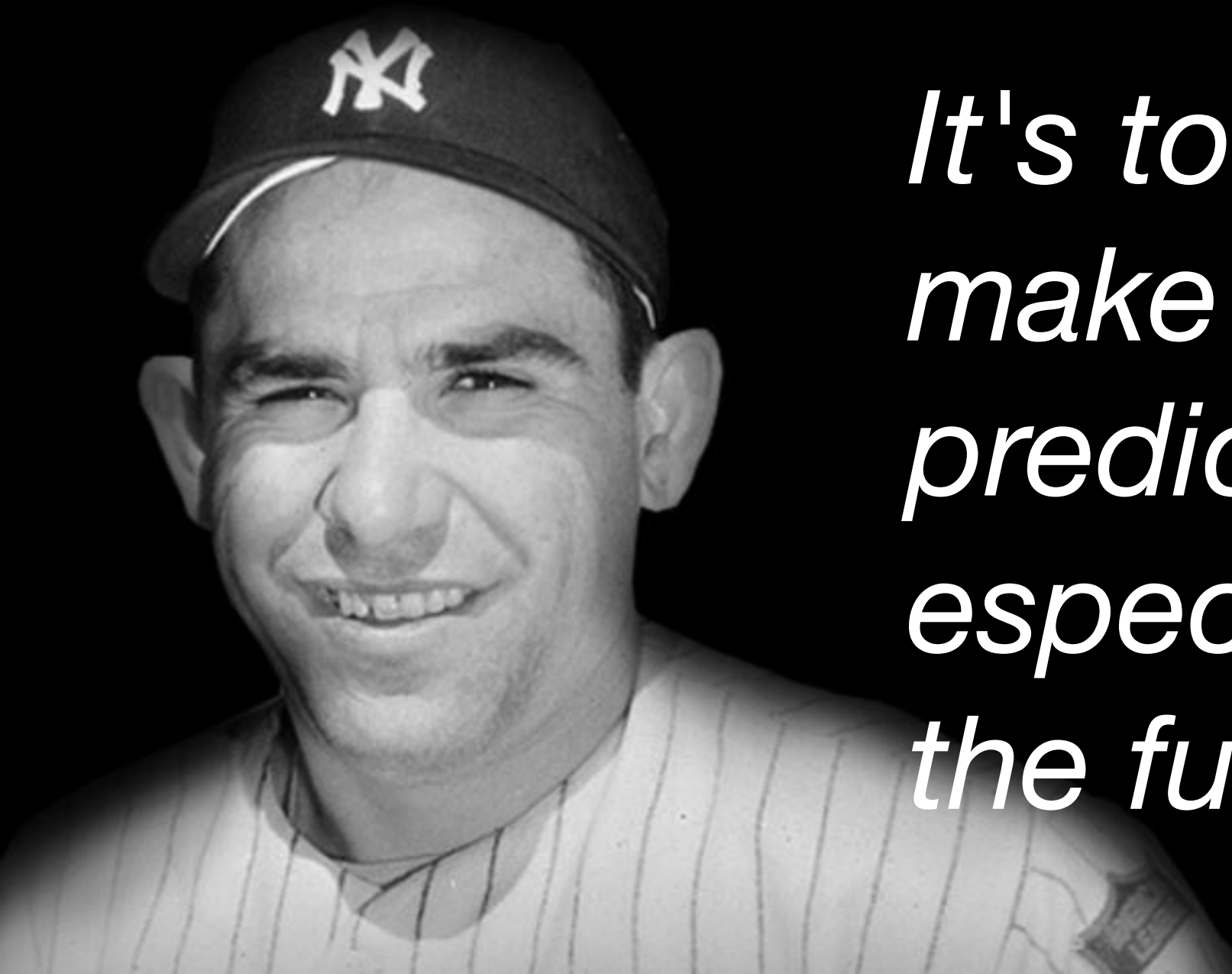
Yes, bring it on!

P100D+



*Only the
paranoid
survive.*

Andy Grove



*It's tough to
make
predictions,
especially about
the future.*

Yogi Berra

4 March 2021

Agreement

Concerning the Adoption of Harmonized Technical United Nations Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these United Nations Regulations*

(Revision 3, including the amendments which entered into force on 14 September 2017)

Addendum 154 – UN Regulation No. 155

Date of entry into force as an annex to the 1958 Agreement: 22 January 2021

Uniform provisions concerning the approval of vehicles with regards to cyber security and cyber security management system

Agreement

Concerning the Adoption of Harmonized Technical United Nations Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these United Nations Regulations

Geneva, 3, including the amendments which entered into force on 11 September 2017

Annex 154 – UN Regulation No. 155

Date of entry into force: 2017-09-11; 22 January 2021

Uniform provisions concerning the approval of vehicles with regards to cyber security and cyber security management system

This document is merely a document to hold the text and legal limit of the UN Regulation No. 155 (2017/02/22) of the Geneva Convention on the Adoption of Harmonized Technical Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these United Nations Regulations



UNITED NATIONS

Agreement concerning the Adoption of Harmonized Technical Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these United Nations Regulations

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2.7. "Post-production phase" refers to the period in which a vehicle type is no longer produced

2.7. "Post-production phase" refers to the period in which a vehicle type is no longer produced until the end-of-life of all vehicles under the vehicle type. Vehicles incorporating a specific vehicle type will be operational during this phase but will no longer be produced. **The phase ends when there are no longer any operational vehicles of a specific vehicle type.**

Table with 2 columns: Paragraph number and text description. Includes sections for Scope, Definitions, and various numbered items.

Table with 2 columns: Paragraph number and text description. Includes sections for 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.23, 6.24, 6.25, 6.26, 6.27, 6.28, 6.29, 6.30, 6.31, 6.32, 6.33, 6.34, 6.35, 6.36, 6.37, 6.38, 6.39, 6.40, 6.41, 6.42, 6.43, 6.44, 6.45, 6.46, 6.47, 6.48, 6.49, 6.50, 6.51, 6.52, 6.53, 6.54, 6.55, 6.56, 6.57, 6.58, 6.59, 6.60, 6.61, 6.62, 6.63, 6.64, 6.65, 6.66, 6.67, 6.68, 6.69, 6.70, 6.71, 6.72, 6.73, 6.74, 6.75, 6.76, 6.77, 6.78, 6.79, 6.80, 6.81, 6.82, 6.83, 6.84, 6.85, 6.86, 6.87, 6.88, 6.89, 6.90, 6.91, 6.92, 6.93, 6.94, 6.95, 6.96, 6.97, 6.98, 6.99, 7.00, 7.01, 7.02, 7.03, 7.04, 7.05, 7.06, 7.07, 7.08, 7.09, 7.10, 7.11, 7.12, 7.13, 7.14, 7.15, 7.16, 7.17, 7.18, 7.19, 7.20, 7.21, 7.22, 7.23, 7.24, 7.25, 7.26, 7.27, 7.28, 7.29, 7.30, 7.31, 7.32, 7.33, 7.34, 7.35, 7.36, 7.37, 7.38, 7.39, 7.40, 7.41, 7.42, 7.43, 7.44, 7.45, 7.46, 7.47, 7.48, 7.49, 7.50, 7.51, 7.52, 7.53, 7.54, 7.55, 7.56, 7.57, 7.58, 7.59, 7.60, 7.61, 7.62, 7.63, 7.64, 7.65, 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What does this mean in practical terms?

1-3 yrs >>> Development

3-5 yrs >>> Production

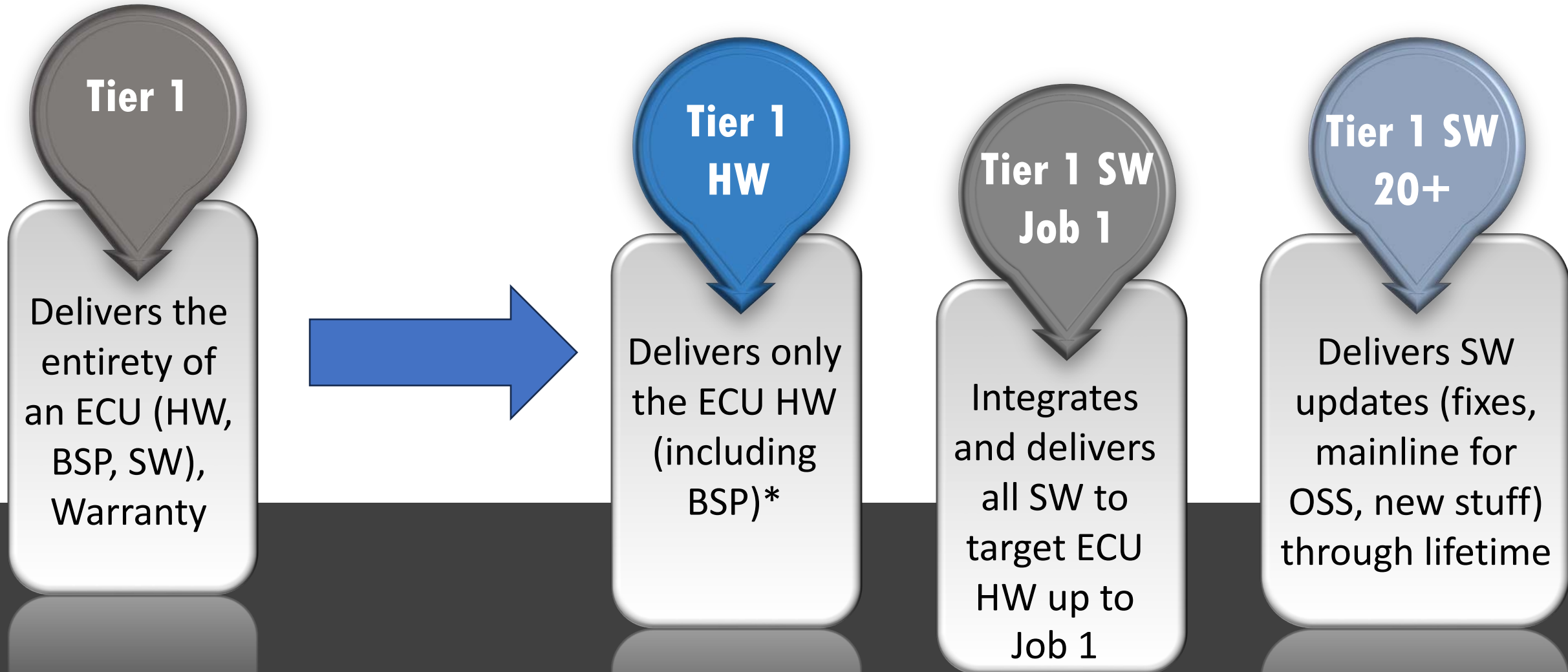
15+ yrs >>> Post-Production

20+ Years of SW Updates!!

Automotive Powerhouses and Parties to the UN 1958 Agreement



Automotive Tier 1 Model Must Change



Questions to Ponder (in no particular order)

1

Do we have model years in 2040?

2

Do your supplier contracts contemplate SW updates for 20+ years?

3

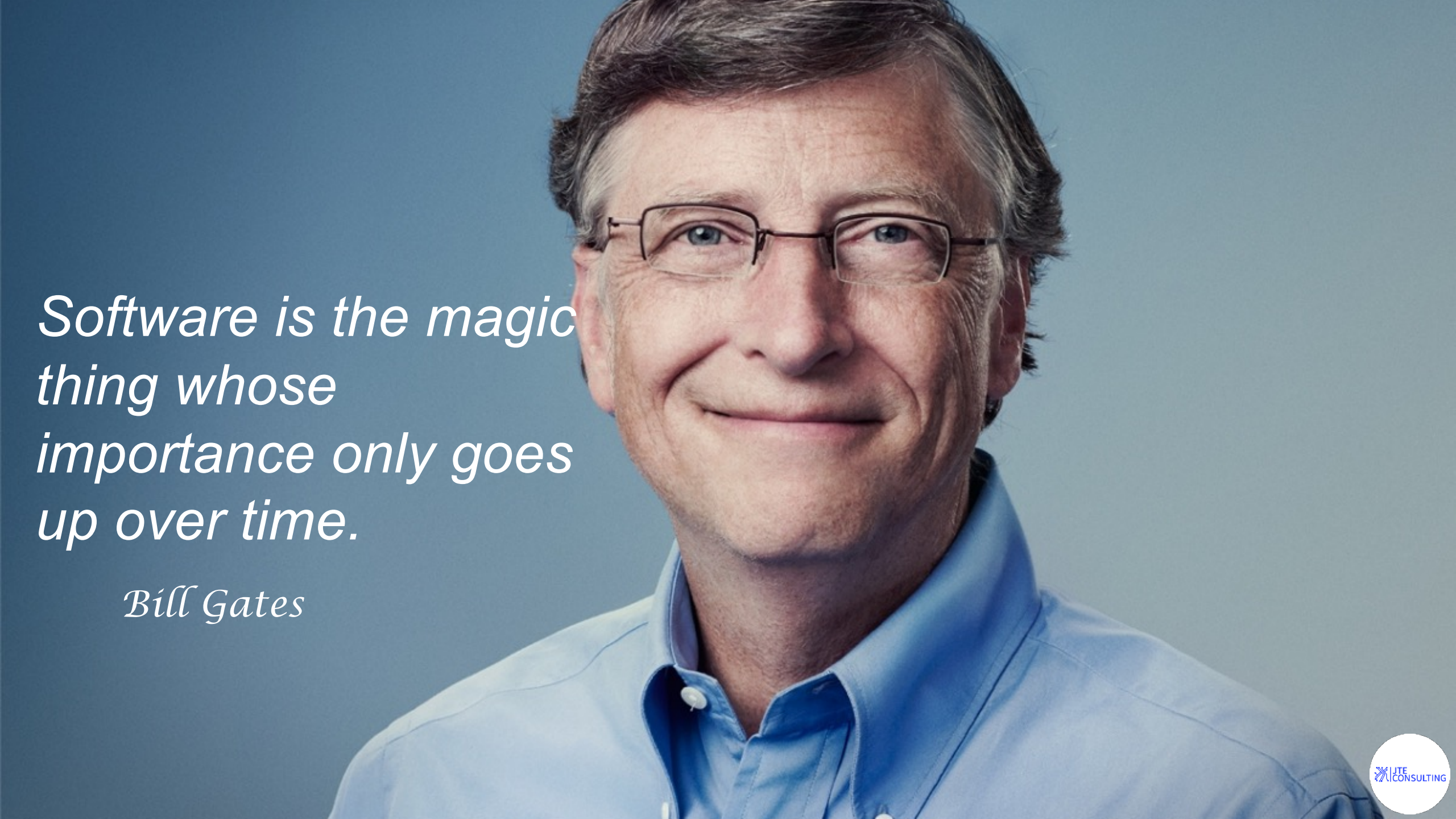
Does your financial structure contemplate SW updates for 20+ years?

4

Have you reorganized yet to be a SW company (Conway's Law)?

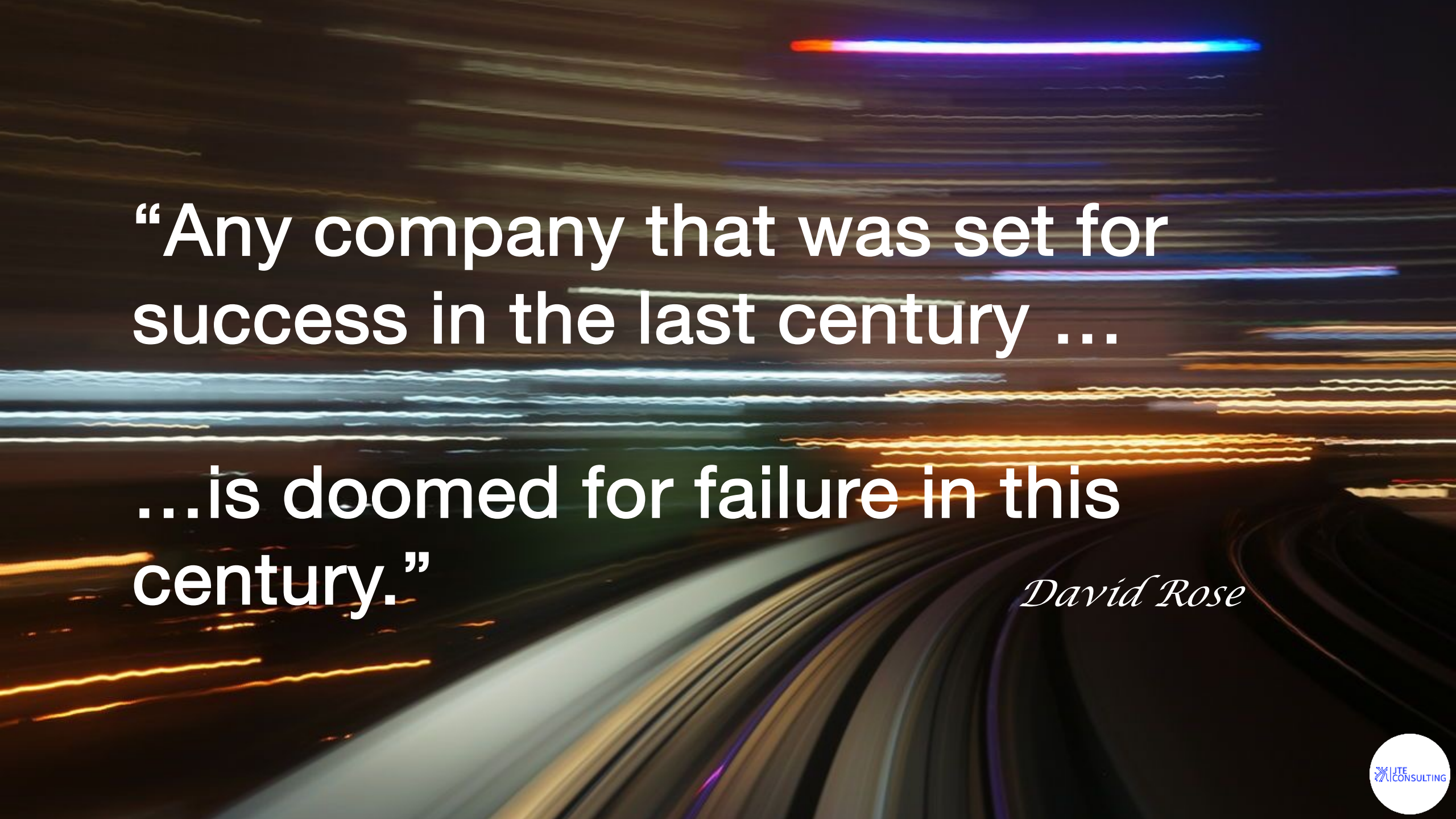
5

Have you changed your revenue recognition approach?

A portrait of Bill Gates, wearing glasses and a blue shirt, smiling slightly. The background is a solid light blue color.

*Software is the magic
thing whose
importance only goes
up over time.*

Bill Gates



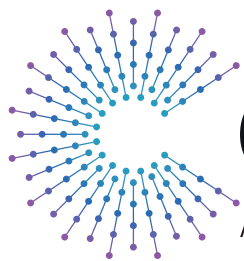
“Any company that was set for
success in the last century ...

...is doomed for failure in this
century.”

David Rose

**“THE BEST WAY
TO PREDICT
THE FUTURE IS
TO CREATE IT.”**





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