Disruption in all directions

Tony Seba calls himself Chief Disruptor. Technically he is an author, lecturer and entrepreneur, but his passion is for things that change things.

> Together with partner James Arbib, a London-based technology investor. Seba has predicted the demise of the private automobile, and the end of big oil, by 2030.

> Seba and Arbib founded RethinkX, a think tank to study disruptions in different industries, and begin advising policy makers and business leaders accordingly. "We saw that they did not have the right information to make decisions regarding future investments. The big consulting companies were predicting linear extensions of past developments, and they were getting it wrong by huge margins."

One example is the pundits' take on solar power. "Just a few years ago they were predicting solar costs twenty years down the road that the market has long since reached. They were making the wrong assumptions, and that led to the wrong decisions."

In fact, Seba says that solar power from photovoltaic panels has gotten 300 times cheaper since 1970. "Installed in the right element, it beats anything on the market today, and that is without subsidies."

Be prepared

Seba studies not only disruptions, but their implications for society. "With every disruption there will be jobs lost and jobs gained. There are always upsides and downsides to disruption. What we have to do is prepare to mitigate the downside."

Take the disruption of the automobile as we know it today. Cars will not only be electric and autonomous, he says, they will no longer be privately owned. "This will bring the cost of transportation down. A family can save thousands on sharing an autonomous electric car, and that will trigger a boom in consumer spending, the biggest ever. It will make tax cuts seem like small change."

With every disruption there will be jobs lost and jobs gained.

What he calls a "trillion dollar" boost in savings to the economy will compensate for loss of three million driving jobs, and time saved on driving less can be used for productivity. "That's another trillion dollars in productivity gains."

Transportation will be disrupted, Seba says, but there will be many other benefits to compensate. "We drive our cars only 4 per cent of available time. The other 96 per cent they are idle. It ties up capital, and it's a waste of real estate. Three and a half cities the size of San Francisco could fit into the parking space that will be vacated in Los Angeles alone."

So what to do with all that space? "Green parks, businesses, housing. Society can benefit from vacated government land used for public parking today. For example there will be room for more bike and pedestrian lanes."

Tony Seba, Chief Disruptor, RethinkX

More disposable income. More green space. Less pollution. "Even those who think they will lose out will probably win," Seba states. "Transportation will become 10 times cheaper. The elderly, the youth, the disabled and the poor can't drive, or can't afford to. This will give them easy, affordable, efficient transportation."

Remember, disruption is not linear.

Tony Seba has a timeline for this scenario, based on the timing of the first autonomous vehicle approved for general traffic - an event he believes is just around the corner. "From the moment that autonomous vehicles are approved, which I predict will be 2021, there will be a 10 year disruption period. Since every job lost is important, we need to start mitigating now."

Shaking up shipping

Not just land based transportation is in for a shakeup. "The main elements that apply to trucking apply to shipping too. And with so many fewer moving parts on electric machinery, there will be much less maintenance, and for many engineers, that will mean an alternative future. But we will still have people on board, and more operating

94



from land." He also predicts that the boost in the economy that will trigger more consumer spending will also lead to more goods being shipped, thus driving volumes in the shipping industry.

But the mechanics of marine transportation are destined to change, he believes. "Electric vehicles being transported could be charged before shipping and used to power the ship." That means no more engine room, and no more engine room jobs. For some, that might sound like a good thing: "I'm not passing value judgement on good or bad jobs, but some of the dirtier jobs today are going to go away, so we might as well be ready."

The future of shipping is sailing more miles and moving more goods, but cheaper, and on ships very different than the ones we know today. "Google is building an operating system for autonomous cars why couldn't they do the same in shipping? Digitalised shipping is as attractive as digitalised driving."

In summary, Seba sees energy and transportation disruptions spreading in all directions: "Amazon is buying their own planes. They are in the logistics business now, and getting better every day. For them going into shipping would be just another logical step. Remember, disruption is not linear."