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Looking Forward with Reliability Engineering



Problems



Tools

Information



In your work
what has changed?

Trends



Importance Trends

Past 100 years since mass
production started...

The 'Yelp' factor

Smaller target markets

Smaller margins (for many
products)



Timelines/Urgency

Trends

Research time

Development time

Manufacturing time

Failure response time



Learning/Development Trends

Just google it...

skip the experiments,
just estimate the results

skipping feedback/review

less field failure details



What new challenge

have you seen this year?

Information Challenge



Tasks: not sufficient

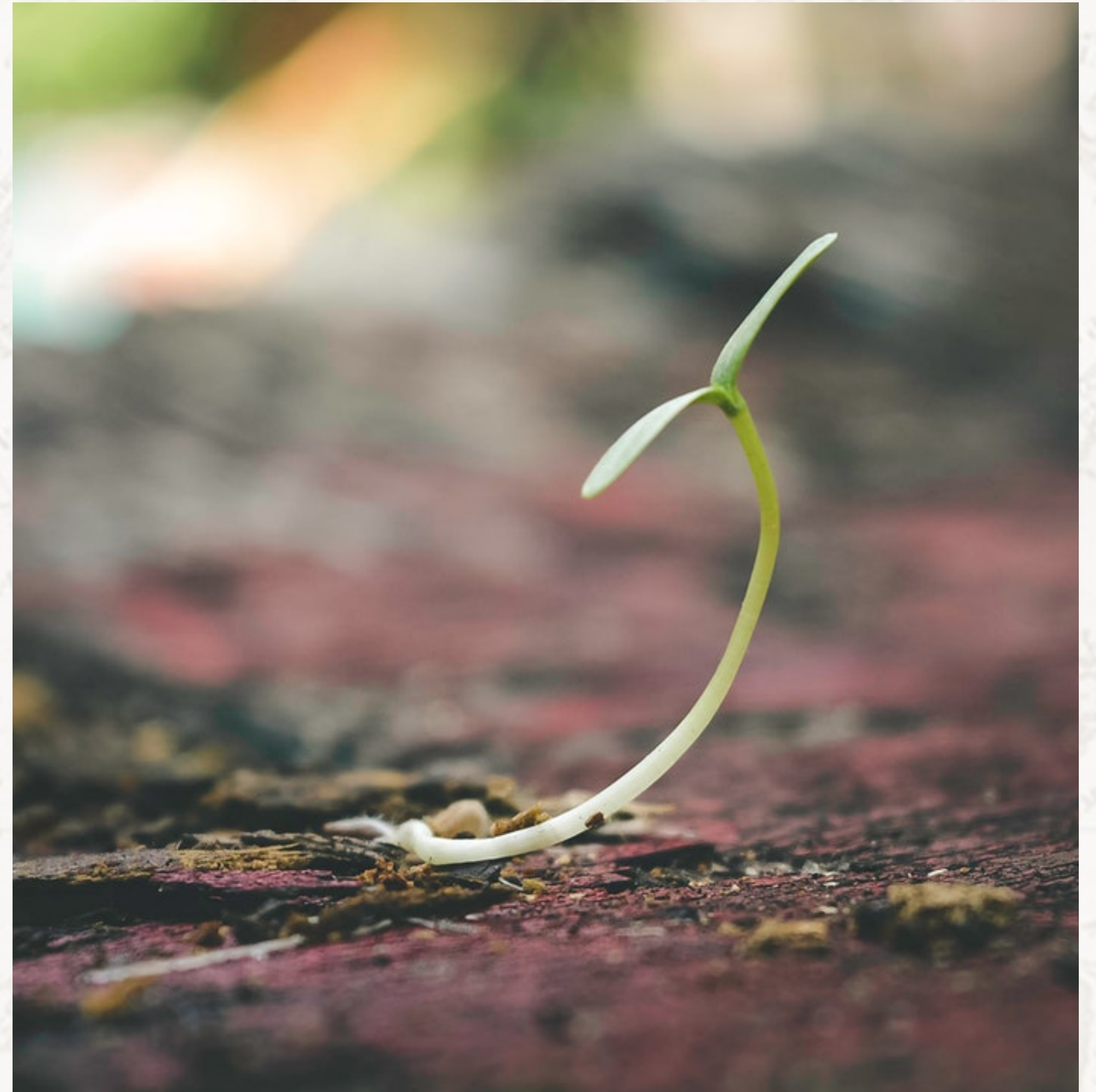
Information challenge

Is being busy enough?

‘We do reliability...’

Outsourced tasks (really?)

Who receives the results?



Reaction: Not Fast Enough

Information challenge

Field failures are too late to matter

Prototype failures will not delay launch

Early failures take too long to understand

‘Get the line running!’ or
‘We need to ship now!’



Proactive: to what?

Information challenge

1,000's of potential failure mechanisms

‘Just run to failure’

‘We did the FMEA early – good right?’



What requests have

you received recently?

An Approach



New project

An approach

Are there milestones?

What are the expectations?

Who has to make decisions?

Do we understand what a failure means?



A new supplier

An approach

Do they know how their product will fail in our planned use?

How do they know?

What is different?

What factors impact the decision to use new supplier?



A Request

An approach

Who is making the request?

Who is receiving the request?

What is the request? specifically

What is the timeline/deadline?

What is the level of completeness?



What is the goal
of our work?

The Future of Reliability



Maturity Matrix → Decisions

The future of reliability

Level 1 – we don't worry about reliability as it will just happen

Level 3 – why don't we get more benefit from all these tasks?

Level 5 – what information do we need to make better decisions?



Decisions → Value

The future of reliability

How many decisions are made when designing a product or maintaining a production line?

If decision made correctly, what is the benefit?

If decision made in-correctly, what is the cost?

What is the chance of making the correct decision?



Information → Decisions

The future of reliability

Here's the key:

An informed decision is more likely to result in making the correct decision.

Are the tasks your performing creating information that will inform decisions? if so, you are adding value.



What decisions are you
working to inform now?

Thanks

see more at AccendoReliability.com