The Science of Work:
Think like a scientist!

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future work centre

Bringing science to the world of work

Services
Independent psychological consulting

Education
Sharing knowledge & expertise

Insights
World of work

Resources
Practical & accessible

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To give leaders trustworthy and useful insights from behavioral science.

MERCER
MAKE TOMORROW, TODAY

What's in common?
Evidence-Based HR
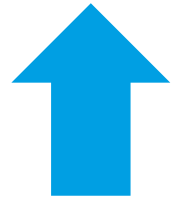practice and solutions

But first… a quick survey!

Complete the pool

Job Tenure

What do you think happened to average job tenure in the past 10 years?

Up? Down? Same?

Job Satisfaction

What do you think happened to job satisfaction in the past 10 years?

Up? Down? Same?

VUCA World

Do you think the World of Work is moving faster?
Is there more VUCA (volatility, uncertainty, complexity and ambiguity)?

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Considering the "Future of Work…"

- We're truly terrible at making predictions
- We're easily swayed by powerful imagery and compelling stories
- "Now that we're in the age of…" → big assumptions
- "As we all know…" → big assumptions

Extraordinary claims require
extraordinary evidence!

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Considering the "Future of Work…"

- Oversimplification of what future workplaces will look and feel like

- Implication that changes are required <u>now</u> for an uncertain future

A focus on the future may lead us to buy in to fads, fashions and organisational myths, which can be expensive and disruptive.

Job Tenure

Job Tenure

Job Tenure US

Figure 7: Median job tenure in the USA, 2002–2012
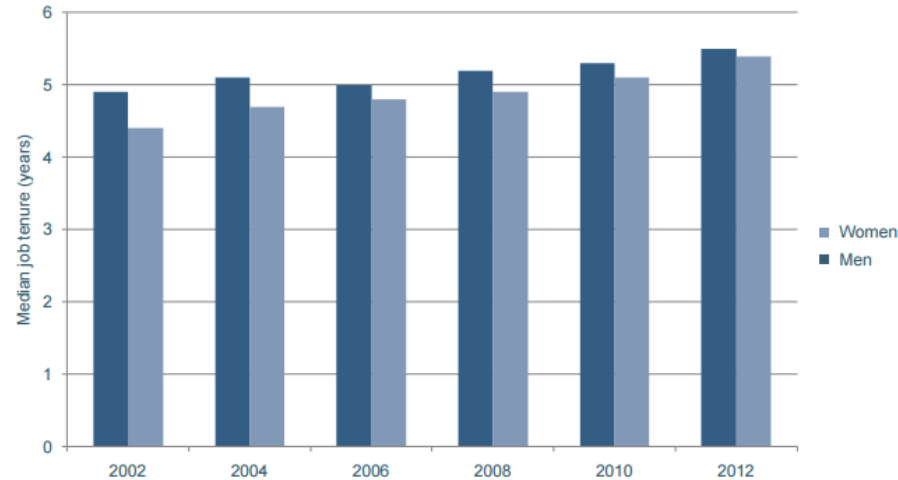
Job Tenure UK

A number of studies suggest that the average amount of time people spend with employer – average job tenure – did not shift greatly between the mid-70s and the mid-2000s. Average job tenure appears to have increased slightly in recent years – consistent with falling job turnover.

(CIPD's Megatrends, 2013)

Job Satisfaction

Job Satisfaction

Employee Job Satisfaction Is Low, Motivation to Leave Is Lower

Work in Progress CONTRIBUTOR
Career talk for women FULL BIO ⌄
Opinions expressed by Forbes Contributors are their own.

Susan Gunelius, Contributor

JUN 20, 2014 @ 09:32 AM   93,537 👁

Most Americans Are Unhappy At Work

Susan Adams, FORBES STAFF ✓
FULL BIO ⌄

UK employee satisfaction drops to two-year low

Written by Eric Johansson on Friday, 06 May 2016. Posted in Engagement, People

Job Satisfaction US

	Completely satisfied	Somewhat satisfied
	%	%
2015 Aug 5-9	44	42
2014 Aug 7-10	48	41
2013 Aug 7-11	46	39
2012 Aug 9-12	47	42
2011 Aug 11-14	47	36
2010 Aug 5-8	48	39
2009 Aug 6-9	50	37
2008 Aug 7-10	48	42
2007 Aug 13-16	46	48
2006 Aug 7-10	43	47
2005 Aug 8-11	42	44
2004 Aug 9-11	50	39
2003 Aug 4-6	44	41
2002 Aug 5-8	43	46
2001 Aug 16-19	41	44
1999 Aug 24-26	39	47
1997 Aug 22-25	35	51
1989 Jul 18-21	28	61

Job Satisfaction UK
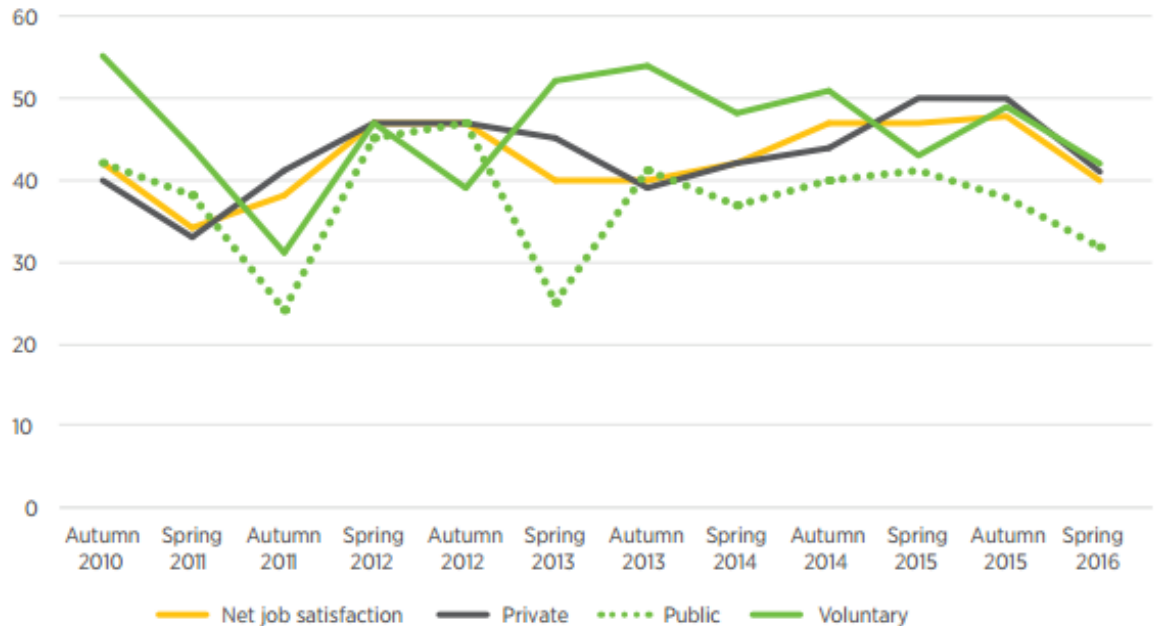
VUCA World

VUCA World

VUCA World

The Economist

"The idea that time is speeding up is clearly popular. It is also plausible. There is just one problem. It is very hard to prove that it is actually happening."

"Hard evidence of a great acceleration is hard to come by. The Economist has considered a variety of measures by which the speed of business in America can be quantified. A few do show some acceleration. But a lot do not."

VUCA World

Now	Five years earlier	Ten years earlier

Measures affecting American companies, days

TEN YEARS EARLIER

	0	1,000	2,000	3,000	4,000	5,000	6,000	7,000
New corporate-bond duration								
Departing CEO tenure								
Corporate-bond duration								
Current CEO tenure*								
Job tenure of people aged > 25								
Private-sector job tenure								
Mutual-fund holding period								
Holding period of S&P 500 shares								
Manufacturers' inventory days								
S&P 500 inventory days								

Sources: Conference Board; BLS; Thomson Reuters; Bloomberg; Cremers & Pareek; S&P; Census Bureau; USPTO; BEA   *Versus 2007

So what? What's wrong with wrong beliefs?

The greatest enemy of knowledge is not ignorance, it is the illusion of knowledge.

(Stephen Hawking)

They're a distraction and diversion

They affect the decisions HR practitioners makes in relation to (for example)

- Recruitment practices
- Retention practices
- Improving job satisfaction
- The speed with which decisions need to be made

How do myths and fads take hold?

In part, our faulty thinking and decision-making

Some examples of our faulty thinking at work…

Social proof	We're right, because others are doing it too
Availability heuristic	Only using the evidence that is available to us
Confirmation bias	Interpreting new information based on our expectations
Fundamental attribution error	It's who they are, rather than the circumstances
Action bias	Doing something is better than nothing
Hindsight bias	In retrospect, it all seems clear
Chauffeur knowledge	Putting too much trust in a spokesperson
Regression to the mean	It'll get better/worse anyway
Outcome bias	Evaluating the decisions based on the outcome, not the decision process
Story bias	We look for connection and meaning to derive a narrative
Liking bias	Influence due to personal liking of a person or thing
Groupthink	Poor decision-making due to group agreement/conformity
False causality	Correlation is not causality

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So what does it mean to be evidence-based?

- "Knowing what works, in what way and for whom"

- "The **conscientious** (effort), **explicit** (clarity) and **judicious** (critical of quality) use of **evidence** from multiple sources to **increase the likelihood** of a favourable outcome"

- An evidence-based approach emphasises:

    - the appraisal of good quality evidence and methodology
    - to improve the quality of our decision-making
    - and the outcomes from our interventions in the workplace.

Think Like a Scientist!

Why be evidence-based?

World of work is extremely complex

Increase in over-simplified off-the-shelf solutions

Understanding how interventions actually work

Why be evidence-based?

Bias in decision-making

Avoiding fads and fashions

Difficult to measure impact of people practices/interventions

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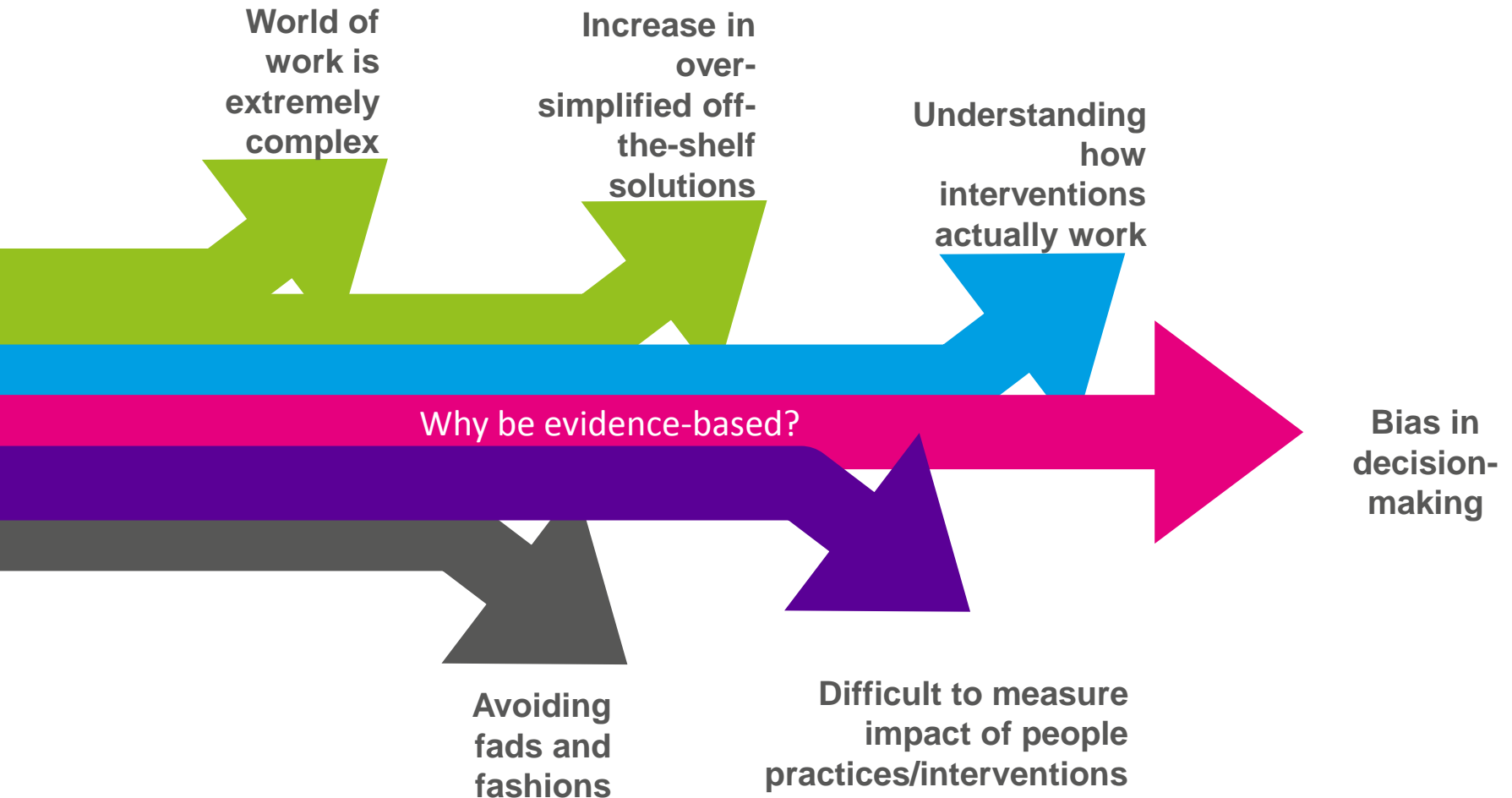
Advantages of these approach

Systemic approach to tackling issues

Learn how to improve over time

Choose and target interventions more effectively

Make better decisions based on evidence

Show ROI of people practices

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Science as a source of evidence

Why still only few organizations use it:

- is hidden behind paywalls,

- hard to understand,

- not always practical

Why is important:

- Because is like a very rigourous and trustworthy case study

- Because scientists may have understood (and maybe even solved) the problem that you are trying to solve

Generational differences

What do you think generational differences impact the most?

1. Commitment to the company
2. Turnover
3. Work Ethic
4. Job Satisfaction
5. None of the above

Where science can help

Different generations ➡ **Different work ethic, satisfaction & turnover**

3 Truths About Millennials That Will
Change the Way You Manage Them

Talking a different language					
Formative experiences	**Maturists** (pre-1945) Wartime rationing Rock'n'roll Nuclear families Defined gender roles – particularly for women	**Baby boomers** (1945-1960) Cold War 'Swinging Sixties' Moon landings Youth culture Woodstock Family-orientated	**Generation X** (1961-1980) Fall of Berlin Wall Reagan/Gorbachev/ Thatcherism Live Aid Early mobile technology Divorce rate rises	**Generation Y** (1981-1995) 9/11 terrorists attacks Social media Invasion of Iraq Reality TV Google Earth	**Generation Z** (Born after 1995) Economic downturn Global warming Mobile devices Cloud computing Wiki-leaks
Attitude toward career	Jobs for life	Organisational – careers are defined by employees	"Portfolio" careers – loyal to profession, not to employer	Digital entrepreneurs – work "with" organisations	Multitaskers – will move seamlessly between organisations and "pop-up" businesses
Signature product	Automobile	Television	Personal computer	Tablet/smartphone	Google glass, 3-D printing
Communication media	Formal letter	Telephone	E-mail and text message	Text or social media	Hand-held communication devices
Preference when making financial decisions	Face-to-face meetings	Face-to-face ideally but increasingly will go online	Online – would prefer face-to-face if time permitting	Face-to-face	Solutions will be digitally crowd-sourced

BUSINESS JOURNAL   MAY 12, 2016

Millennials: The Job-Hopping
Generation

THE BLOG   02/22/2016 01:26 pm ET | Updated Feb 22, 2017

The Problem With Millennials and Work Ethic

Where science can help

Different generations ✖️➡️ Different work ethic

Summary of 77 studies in 85 organizations involving 20.000 people

Boomer Work Ethic May Be No Stronger than GenX or Millennials

By Rick Nauert PhD
~ 1 min read

Researchers have determined that contrary to current opinion, the baby boomer generation does not have a greater work ethic than people born a decade or two later.

A team of researchers from Wayne State University in Michigan completed a comprehensive analysis of 77 relevant studies to arrive at the new conclusion.

The economic success of the United States and Europe around the turn of the 20th to the 21st century is often ascribed to the so-called Protestant work ethic of members of the baby boomer generation born between 1946 and 1964.

Where science can help

Different generations ✖➤ Different job satisfaction, commitment and turnover

Summary of 20 studies
in 25 organizations
involving 20.000+ people

What does scientific research say about generational differences?

Costanza and colleagues (2012) conducted the first known quantitative meta-analysis published in the Journal of Business and Psychology. Meta-analyses are large researches that systematically review the scientific evidence available, excluding unreliable studies and critically evaluating and weighting empirical findings, in order to make very trustworthy conclusions. They reviewed 265 articles, and finally included 20 very reliable researches across nearly 20,000 workers in order to see if generational differences had an effect on **job satisfaction**, **organizational commitment**, and **intent to turnover**. The four different generations of employees taken into account were Traditionals, Baby Boomers, Generation X, and Millennials.

Contrary to the claims about generational differences, they surprisingly found that there were **no significant differences in job satisfaction, organizational commitment and intent to turnover** that can be explained by different generation membership. Older workers were slightly more satisfied than younger workers and they were less likely to leave their jobs; but this result was explained by the difference in age or tenure of the employees, not because of generational differences. In other words, as the employees get older and progress through their careers, their jobs often gain a greater degree of autonomy, variety, and task meaning, which can increase job satisfaction. Regarding organizational commitment, there was no significant difference between older and younger generations. To sum up, the results demonstrate that the differences appear to most likely be caused by other factors, rather than generational differences.

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Where science can help

Different generations ✖ Different turnover

Millennials' job tenure no shorter than that of prior generation

% of 18- to 35-year-old workers by length of employment with current employer

13 months or more

Millennial in 2016	63.4%
Gen X in 2000	59.9

5 years or more

Millennial in 2016	22.0
Gen X in 2000	21.8
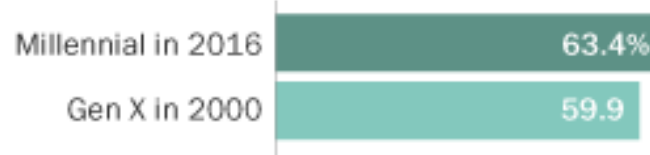
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Yearly training expenditure US

Teamwork

$70 Billion

Teamwork Training

What is teamwork made of?

Controlling the team's performance

Defining the team's mission
Setting team goals
Formulating action plans

Communicating
Coordinating with each other
Cooperating

Monitoring environment and team performance
Solving problems
Adjusting team strategy
Assisting each other

+

Keeping the team together

Managing conflicts
Supporting members in difficult times

SCIENCE FOR WORK   Adapted from McEwan D., Ruissen G. R., , Eys M.A., Zumbo B. D. & Beauchamp M. R., 2017

Which method is best for teamwork training?

Most effective

Simulations
Teams try out and put into practice teamwork behaviors

Team Reviews
Teams monitor the quality of their teamwork during in-situ reviews

Workshops
Teams take part in various interactive group activities

Didactical Education
Teams receive lectures in a classroom-type setting

Least effective

SCIENCE FOR WORK   Based on McEwan D., Ruissen G. R., , Eys M.A., Zumbo B. D. & Beauchamp M. R., 2017

Summary of 51 studies
of 71 different trainings
involving 8.400 people

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Onboarding

How To Build An Effective Employee Onboarding System - Forbes
https://www.forbes.com/.../how-to-build-an-effective-employee-onboarding-system/ ▼
Mar 16, 2017 - One of the common threads I've noticed in the most successful teams I've met is
effective onboarding. When you're an entrepreneur, slowing ...

5 Strategies for an Effective Employee Onboarding Process - Thrive TRM
thrivetrm.com/5-strategies-employee-onboarding-process/ ▼
Apr 12, 2016 - Understanding the strong connection between a well-designed **onboarding** process and
later employee retention can help you assign **onboarding** the priority it deserves in your talent
management strategies. ... Orientation and training are essential parts of the **onboarding** process, but
by ...

How to Build an Onboarding Plan for a New Hire | Inc.com
https://www.inc.com/guides/2010/04/building-an-onboarding-plan.html
Onboarding plans are intended to make new employees familiar with the overall goals ... With an
effective onboarding program, you should aim to present basic ...

Employee Onboarding Program Strategies | Chronus
https://chronus.com/employee-onboarding-program-guide ▼
In this guide, learn how to make your employee **onboarding** program strategic and **effective** for better
new hire engagement, productivity, and retention.

Run an Effective New Hire Onboarding Program 4 Key Pillars ...
https://www.mindtickle.com/.../run-effective-new-hire-onboarding-program-4-key-pil... ▼
Effective new hire **onboarding** programs help you foster a more successful work atmosphere and
better bottom line results. Learn the four key pillars!

7 Steps to an Effective Onboarding Process | TriNet Blog
https://www.trinet.com/hr-insights/blog/.../7-steps-to-an-effective-onboarding-process ▼
Oct 7, 2016 - Poor **onboarding** can have many disastrous effects and it can set a new employees up
for failure. Here are seven ways to improve your ...

A Step-by-Step Checklist for Effective Employee Onboarding
https://growtheverywhere.com/hiring-2/effective-employee-onboarding/ ▼
Imagine this, you just got hired at a new company that you were really excite to work for. They put you
through a rigorous hiring process, you faced every ...

5-Point Checklist for Effective Employee Onboarding - TINYpulse
https://www.tinypulse.com/blog/sk-every-employee-onboarding-tip-youll-need ▼
Jun 19, 2017 - How strong is your company's employee **onboarding** process? Use this five-point
checklist to help new hires smoothly transition into your ...

6 Steps to Create an Effective Employee Onboarding Experience
https://www.entrepreneur.com/article/253691 ▼
Jan 4, 2016 - Onboarding is a well-known practice in human resources (HR) ... Here are five steps to
creating an **effective onboarding** experience at your ...

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Onboarding Process

Effective Onboarding — Can lead to improvements in:
- Performance
- Commitment
- Job Satisfaction
- Intentions to remain

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Adapted from: Bauer, Bodner, Erdogan, Truxillo, & Tucker (2007).

Summary of 70 studies
of 85 different organizations
involving 12.000 people

**ONBOARDING:
3 KEY ELEMENTS
TO MAXIMIZE
NEW HIRE'S SUCCESS**

Clarity
Understanding the role
and main responsibilities of
the job.

Confidence
Learning new tasks of the
job and believing one will
be able to master them.

Connection
Building interpersonal
relationships, feeling liked
and accepted by others.

Adapted from: Bauer, Bodner, Erdogan,
Truxillo, & Tucker (2007).

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Team Performance

What do you think is the most important driver of team performance?

1. Members' intelligence
2. Team cohesion
3. Psychological safety
4. Knowledge sharing
5. None of the above

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Where science can help

The New York Times

What Google Learned From Its Quest to Build the Perfect Team

New research reveals surprising truths about why some work groups thrive and others falter.

By CHARLES DUHIGG

FEB. 25, 2016

Google

Psychological Safety

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Psychological Safety

WHAT'S THE DIFF?
Trust and Psychological Safety

Psychological safety is the belief that your environment is safe for interpersonal risk-taking. It's similar, but slightly different from, trust.

TRUST
Will **YOU** give others the benefit of the doubt when you take a risk?

PSYCHOLOGICAL SAFETY
Will **OTHERS** give you the benefit of the doubt when you take a risk?

"Bob is probably going to freak out if I disagree with him."

"My team expects me to speak up. It's how we do things."

Sources: Edmondson, A. C. (2002). Managing the risk of learning: Psychological safety in work teams. Boston, MA: Division of Research, Harvard Business School. and Frazier, M. L., Fainshmidt, S., Klinger, R. L., Pezeshkan, A., & Vracheva, V. (2017). Psychological safety: A meta-analytic review and extension. Personnel Psychology, 70(1), 113-165.

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ANTECEDENTS & OUTCOMES
PSYCHOLOGICAL SAFTEY

Things that may help cultivate psychological safety

Role Clarity*

Peer Support*

Interdependence

Learning Orientation

Positive Leader Relations

ANTECEDENTS

PSYCHOLOGICAL SAFETY

A sense that people will not be embarrassed or punished for speaking up.

Benefits associated with psychological safety

Information Sharing*

Satisfaction*

Learning Behaviors*
(Seeking info; experimenting; reflecting)

Engagement

Improved Performance

OUTCOMES

*Antecedents and outcomes that had a large effect size at both the individual and group level of analysis.
Source: Frazier, M. L., Fainshmidt, S., Klinger, R. L., Pezeshkan, A., & Vracheva, V. (2017). Psychological safety: A meta-analytic review and extension. Personnel Psychology, 70(1), 113-165.

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Summary of 117 studies
in 130 organizations
involving 22.000 people
and 5.000 groups

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Psychological Safety

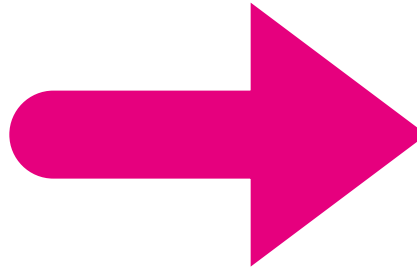# Team Performance

What do you think is the biggest driver of team performance?

1. Members' intelligence
2. Team cohesion
3. Psychological safety
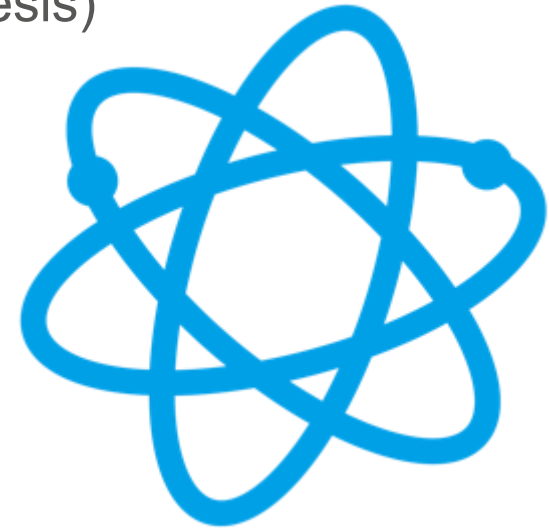4. Knowledge sharing
5. None of the above

Team Cohesion!

bonds of friendship, caring, closeness, and enjoyment of each other's company

Putting this into practice: Think like a scientist!

❑ What's the problem you're trying to solve? (Hypothesis)

❑ How do you know there's a problem?

❑ What's the evidence that potential solutions work?

❑ How will you know if the solution works <u>for you</u>?

Putting this into practice: Think like a scientist!

❑ What data can you use?

❑ What methods can you use to gather and analyse it?

❑ How will you share your learning?

❑ How will you make this part of what you do?

Useful Resources
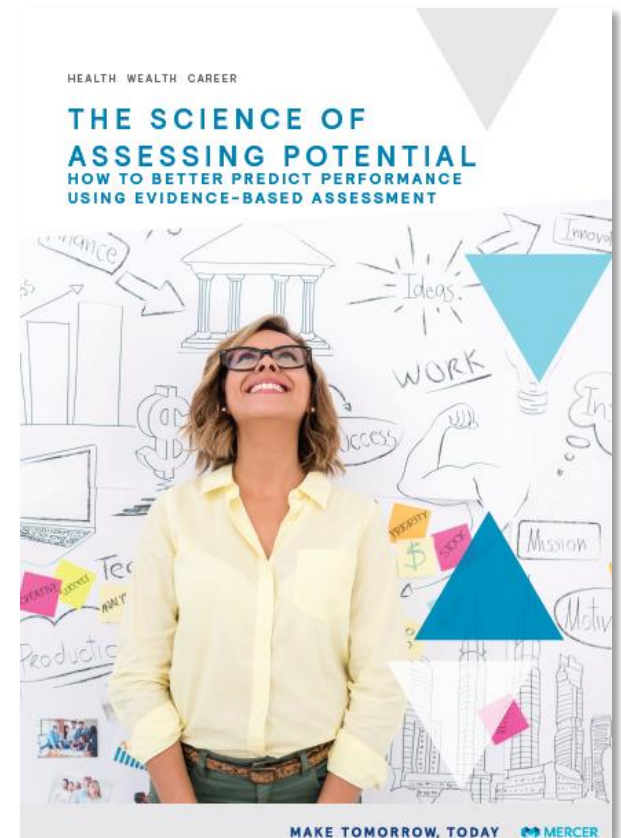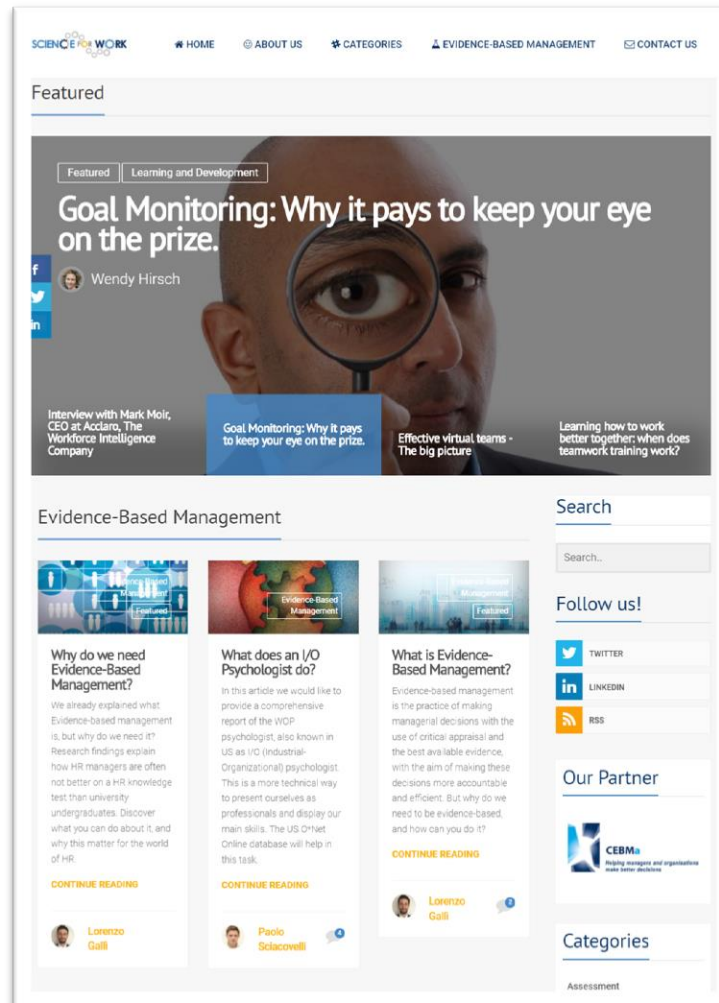

www.futureworkcentre.com/

https://scienceforwork.com/

https://www.mercer.com/