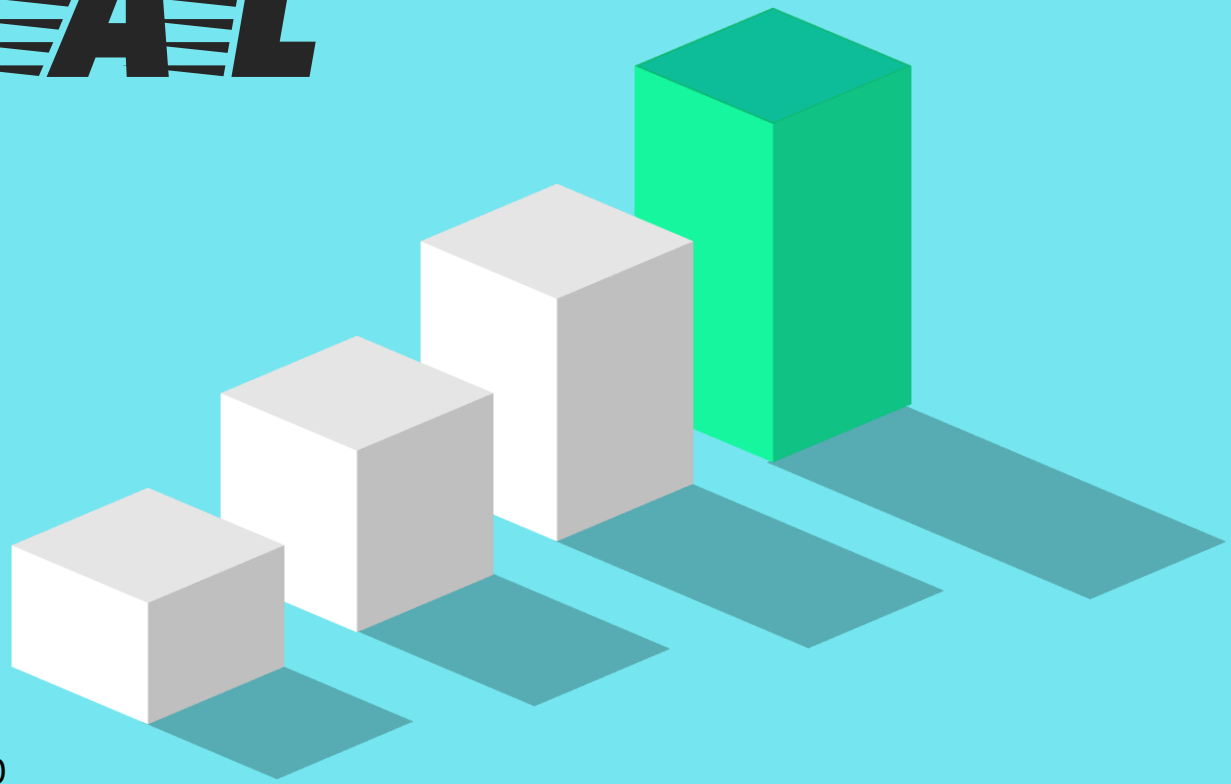
Growth Potential

Practical HR Analytics with Maxim



L. Maxim Laurijssen
l.m.laurijssen@rug.nl
maxim.laurijssen@gmail.com

Code and slide deck at:
https://github.com/iLLucionist/growthp

The Seal of Approval

Problem: what should we advise organizations based on employee research?

Now what !?

Why industry benchmarks are not really meaningful

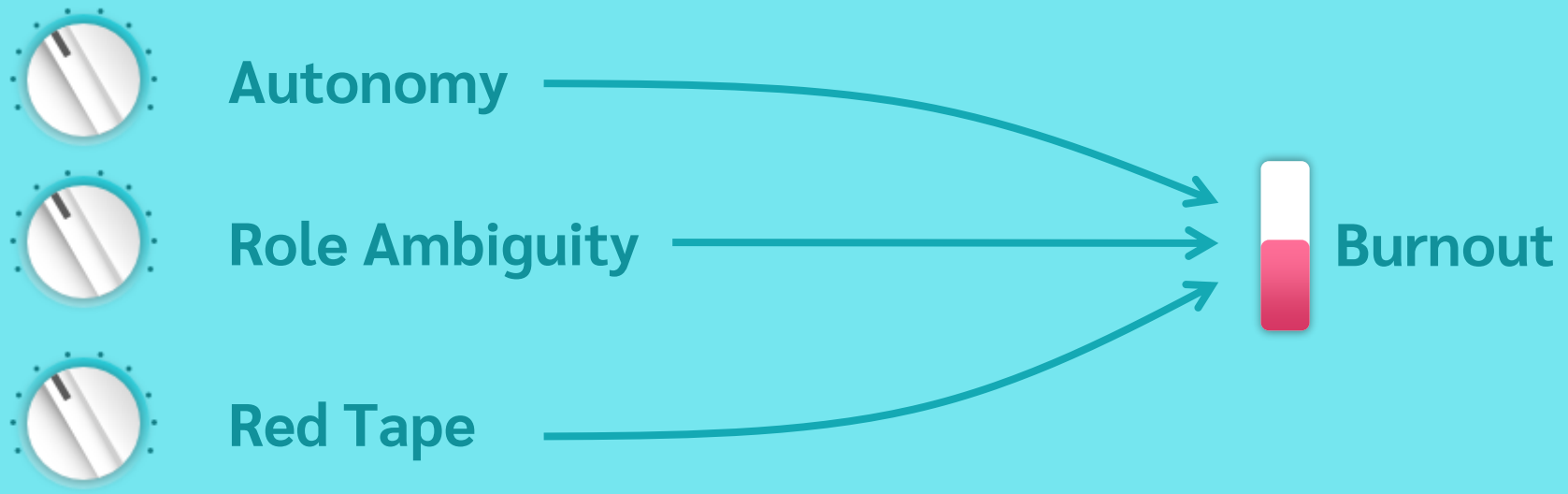
1. You don’t know whether your score is meaningfully higher or lower than the benchmark

2. You don’t know how you may improve the outcome

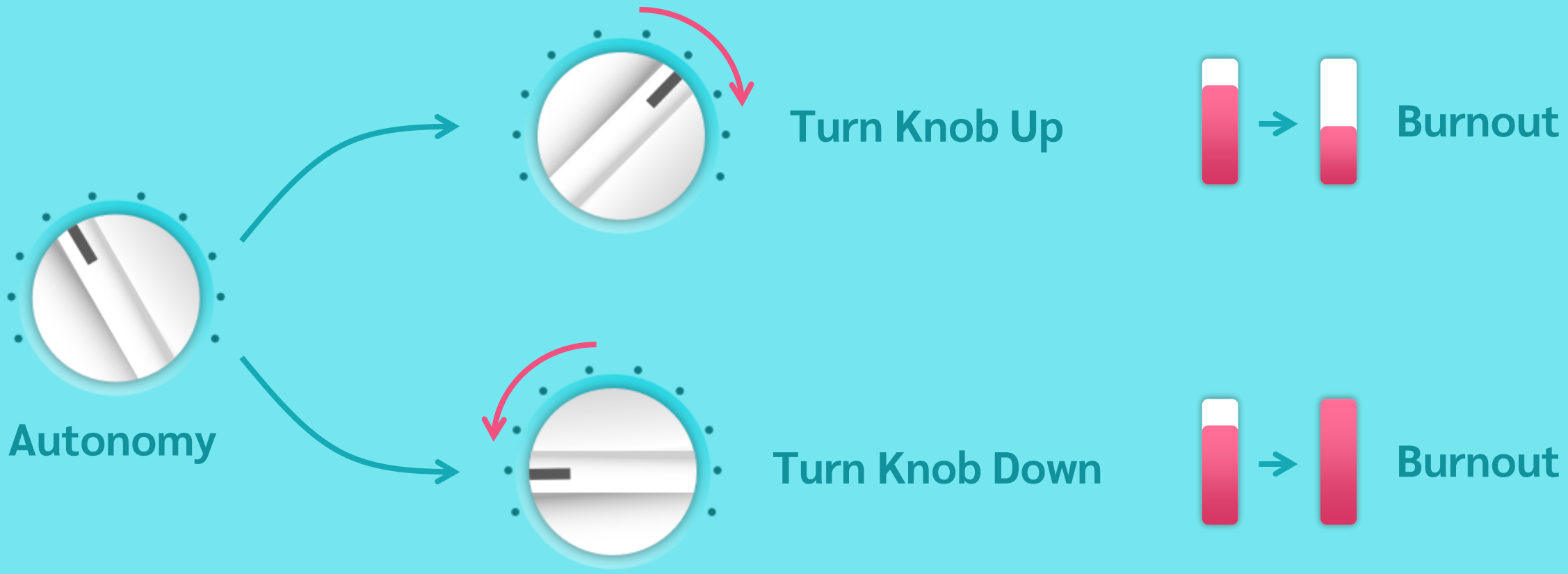
3. Is knowing your absolute score really all that meaningful?

Finding Control Knobs

Using regressions to find work factors organizations may change to improve outcomes they care about



Changing Knobs Changes Outcomes

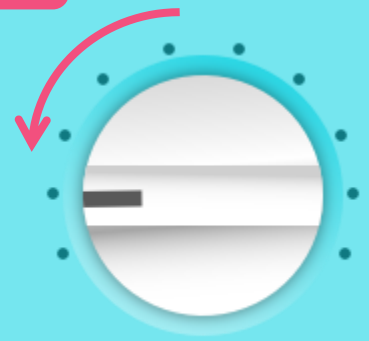


Changing Knobs Changes Outcomes

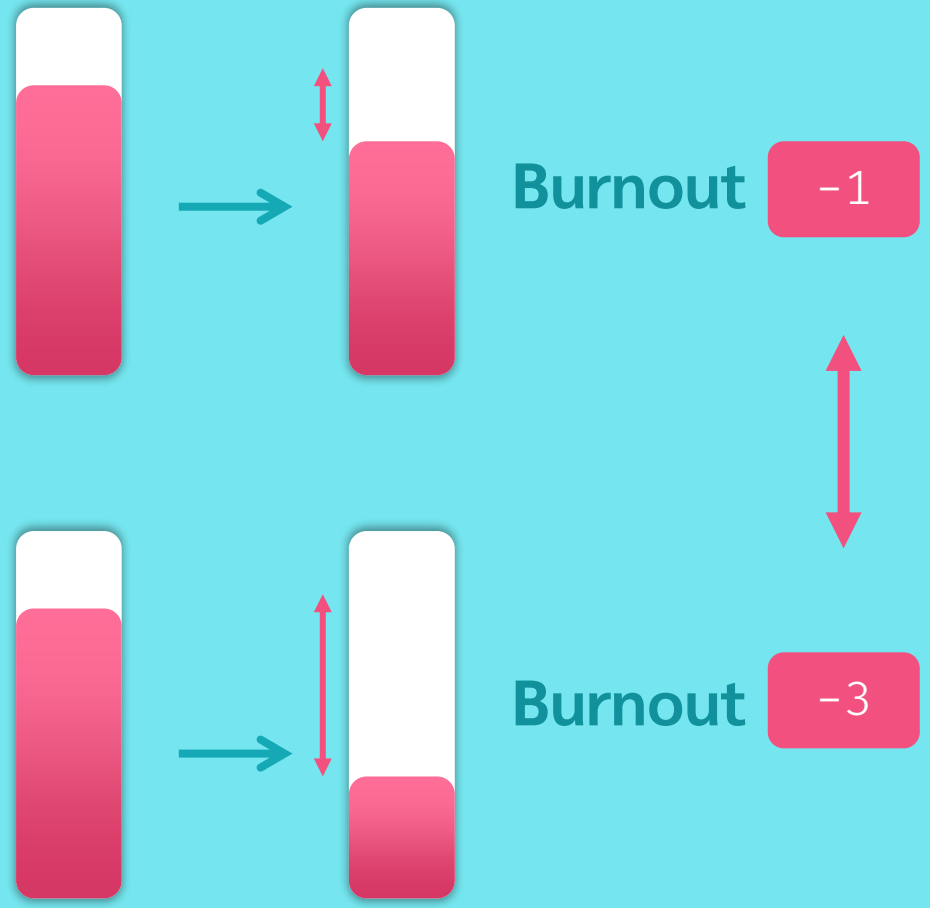
+1

Autonomy

-1



Role Ambiguity



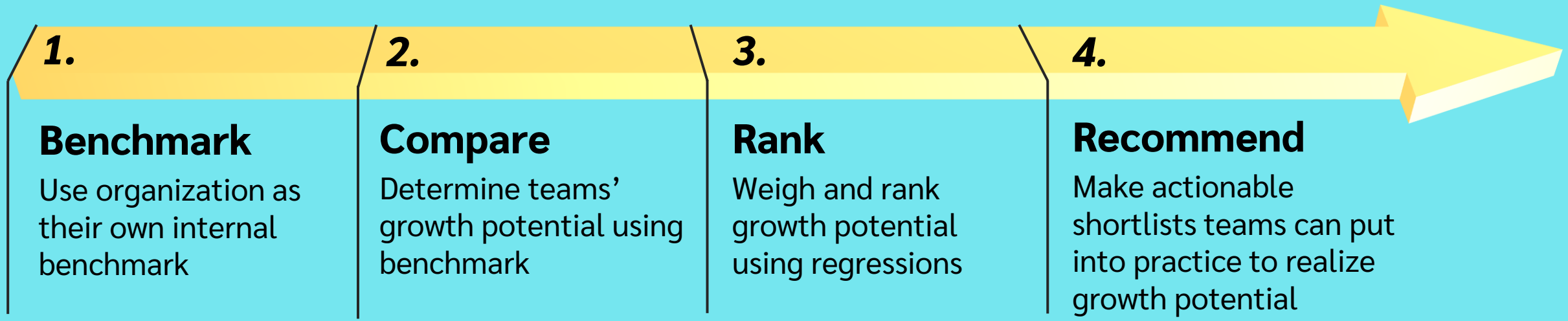
But… we don’t know how far we can still turn the knobs

- Regression analysis may reveal useful turning knobs
- Regression weights do not tell us how far the knobs are already turned

Solution: combine scores with regression weights

Growth Potential

Find out how far the knobs are already turned and recommend which knobs to turn to improve important outcomes



Growth Potential

Valuable Work

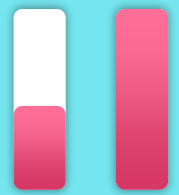
Employees' perception that work is personally meaningful and interesting

Team score	7.5
Benchmark	6.0

1.5

1. **Red Tape**
   Burdensome and unnecessary rules
2. **Obstacles**
   Things at work that stand in the way of completing tasks and attaining goals
3. **Valuable Work**
   Employees' perception that work is personally meaningful and interesting

Growth potential:
How far the knob can still be turned



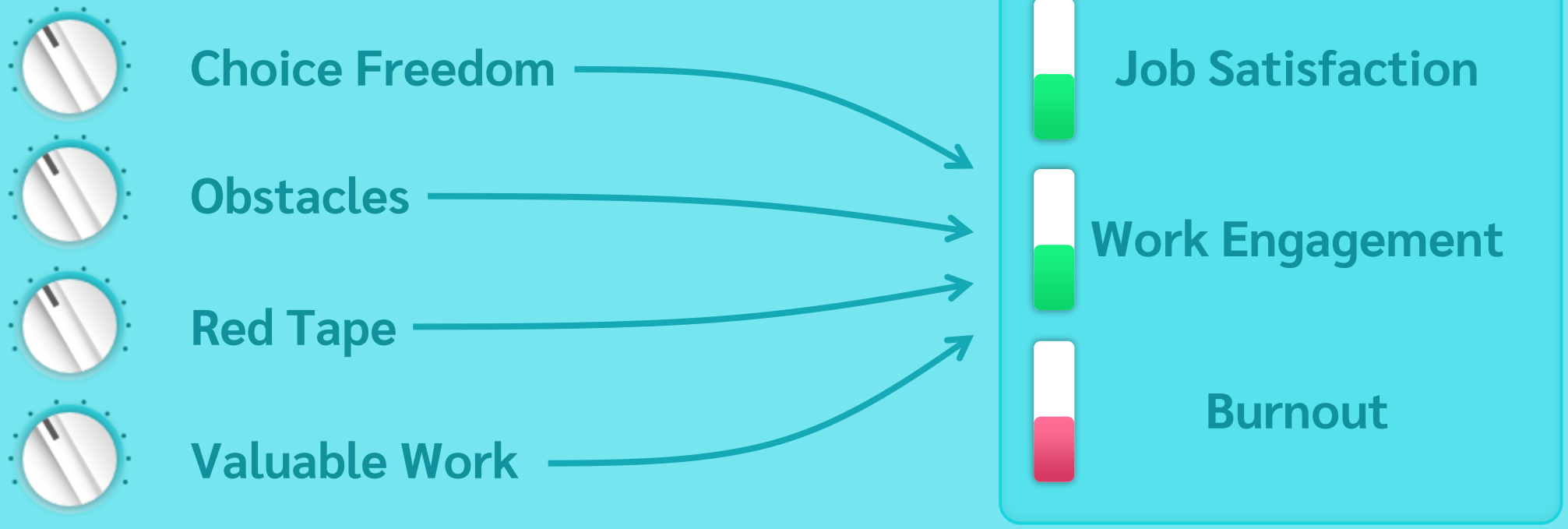
Recommended actions:
The knobs that improve outcomes the most

Autonomy Analytics

Case Study: Which autonomy “knobs” should a team turn to improve work outcomes?

Autonomy Analytics

Case Study: Which autonomy “knobs” should a team turn to improve these work outcomes?



The Code

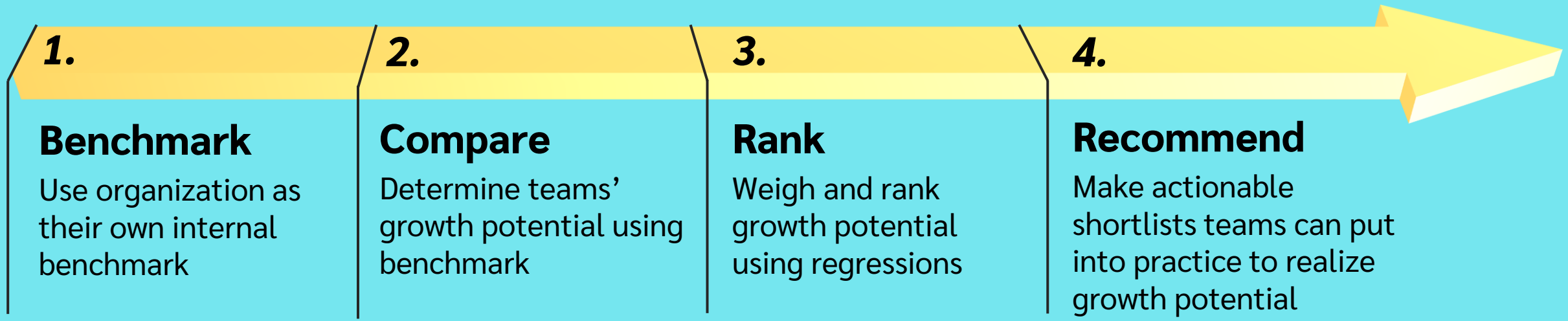
https://github.com/iLLucionist/growthp

Explore yourself!

- R package in the making
- R code available on GitHub
- Bring Your Own Data
- Uses vanilla R – no packages required!

Growth Potential

Find out how far the knobs are already turned and recommend which knobs to turn to improve important outcomes



1 BENCHMARK

Use organization as their own internal benchmark

Reference point
Use high scoring teams (90th percentile) as comparison standard
r10 benchmark

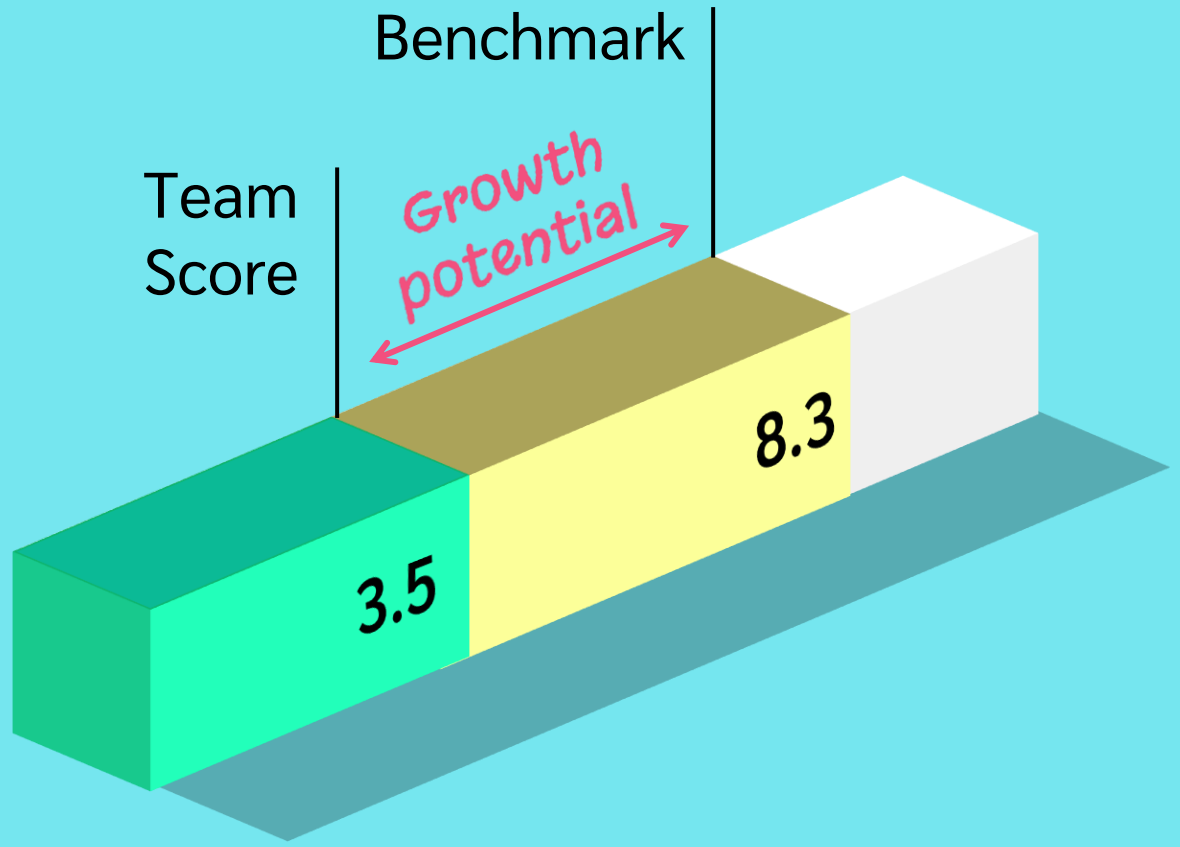
	10%	90%	Reference
Choice Freedom	5.6	8.2	8.2
Obstacles	4.2	7.0	4.2
Red Tape	6.0	9.0	6.0
Valuable Work	7.3	8.9	8.9
Job Satisfaction	7.0	8.3	8.3
Work Engagement	6.4	8.3	8.3
Burnout	2.1	4.4	2.1

"Flipping"

2 COMPARE

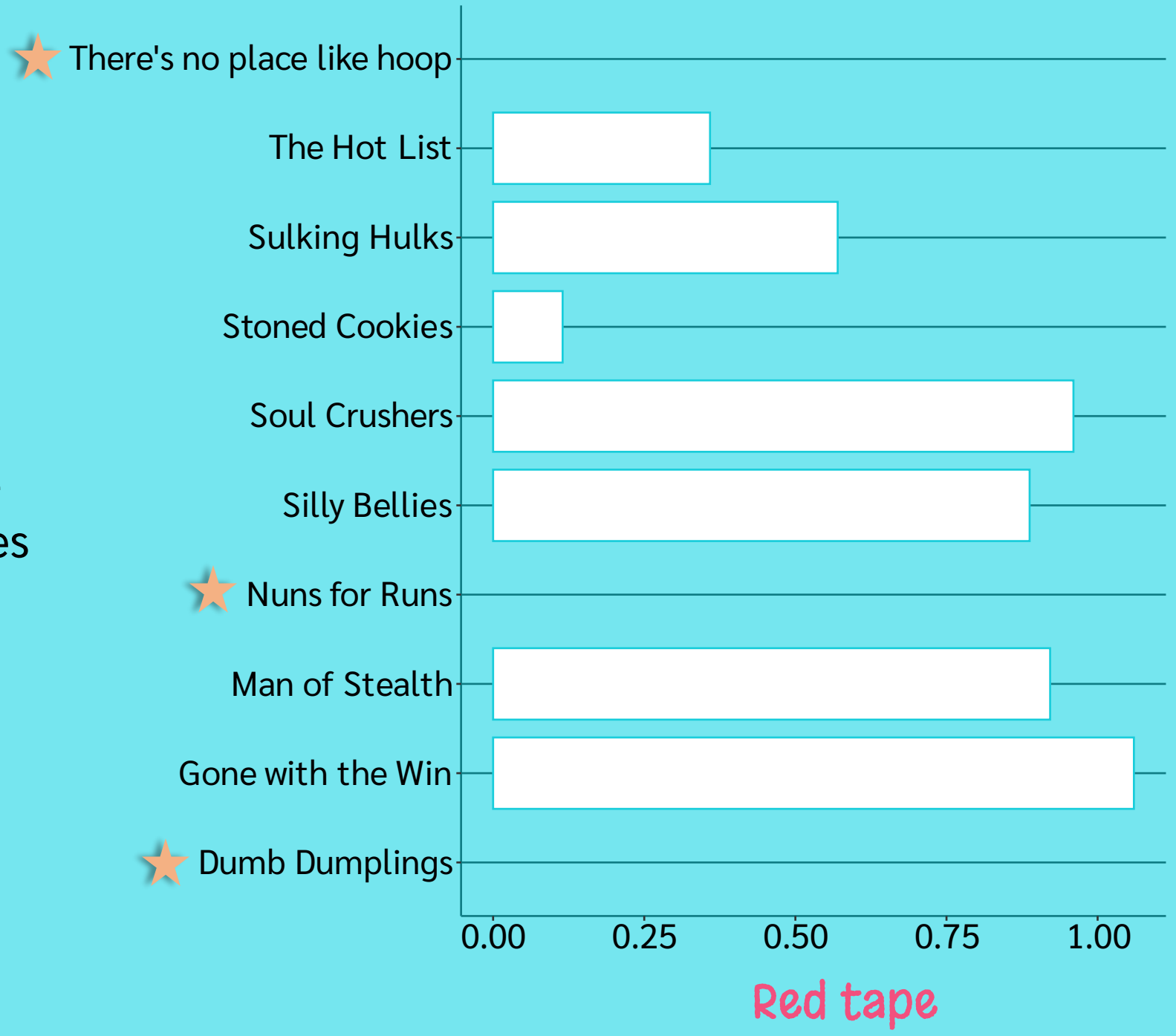
Determine teams' growth potential using benchmark

Growth potential
Calculate difference between a team scores and the comparison standard for all variables



8.3 – 3.5 = 4.8

Growth potential
Calculate difference between a team scores and the comparison standard for all variables

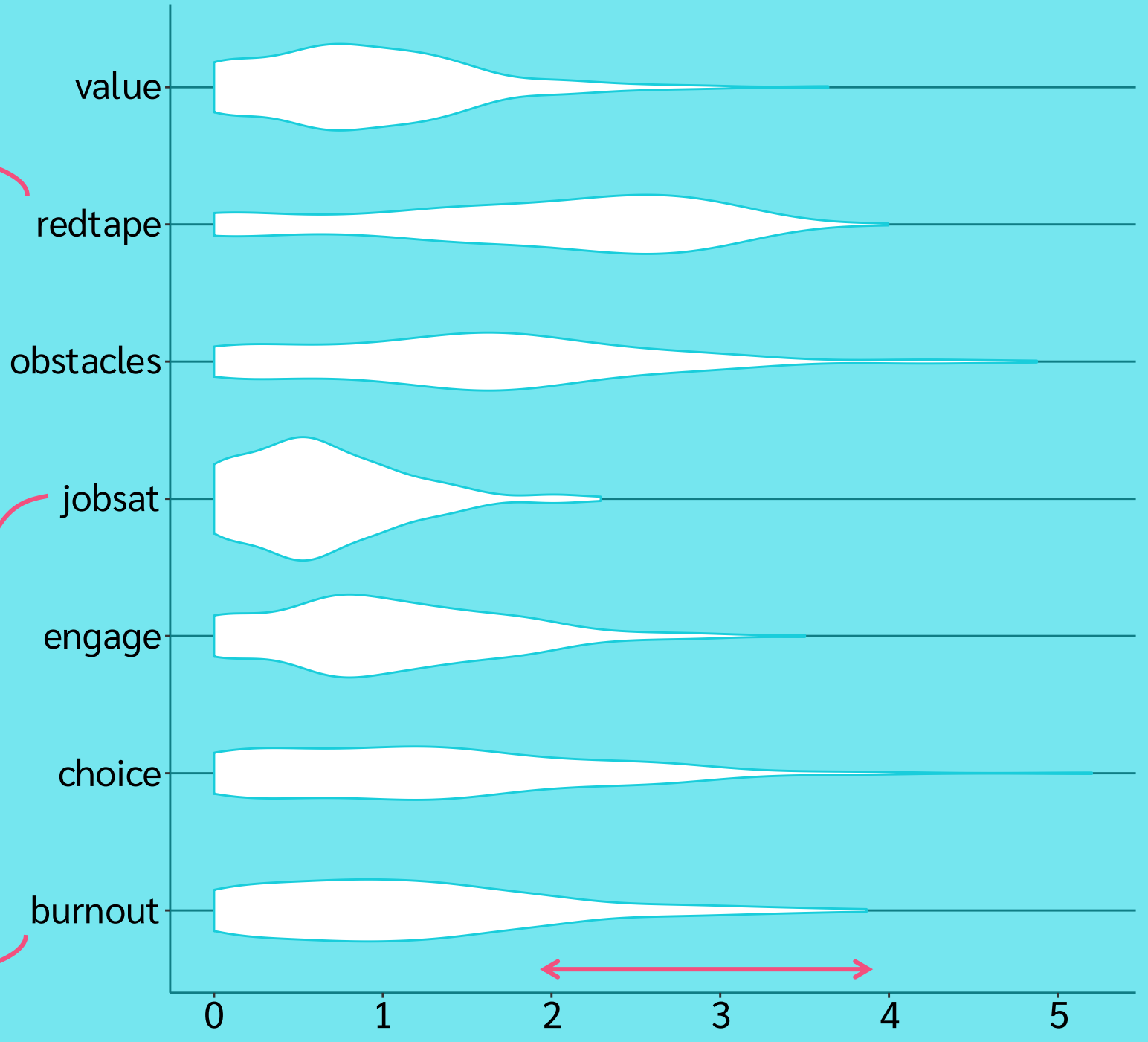


Lots of room for improvement...

Growth distributions
How much growth there is for all teams on all variables

...here not so much

Long tail!



3 RANK

Weigh and rank growth potential using regressions

One model to rule them all

Multivariate regression with all ivs and dvs. Calculate average coefficients.

row means ←

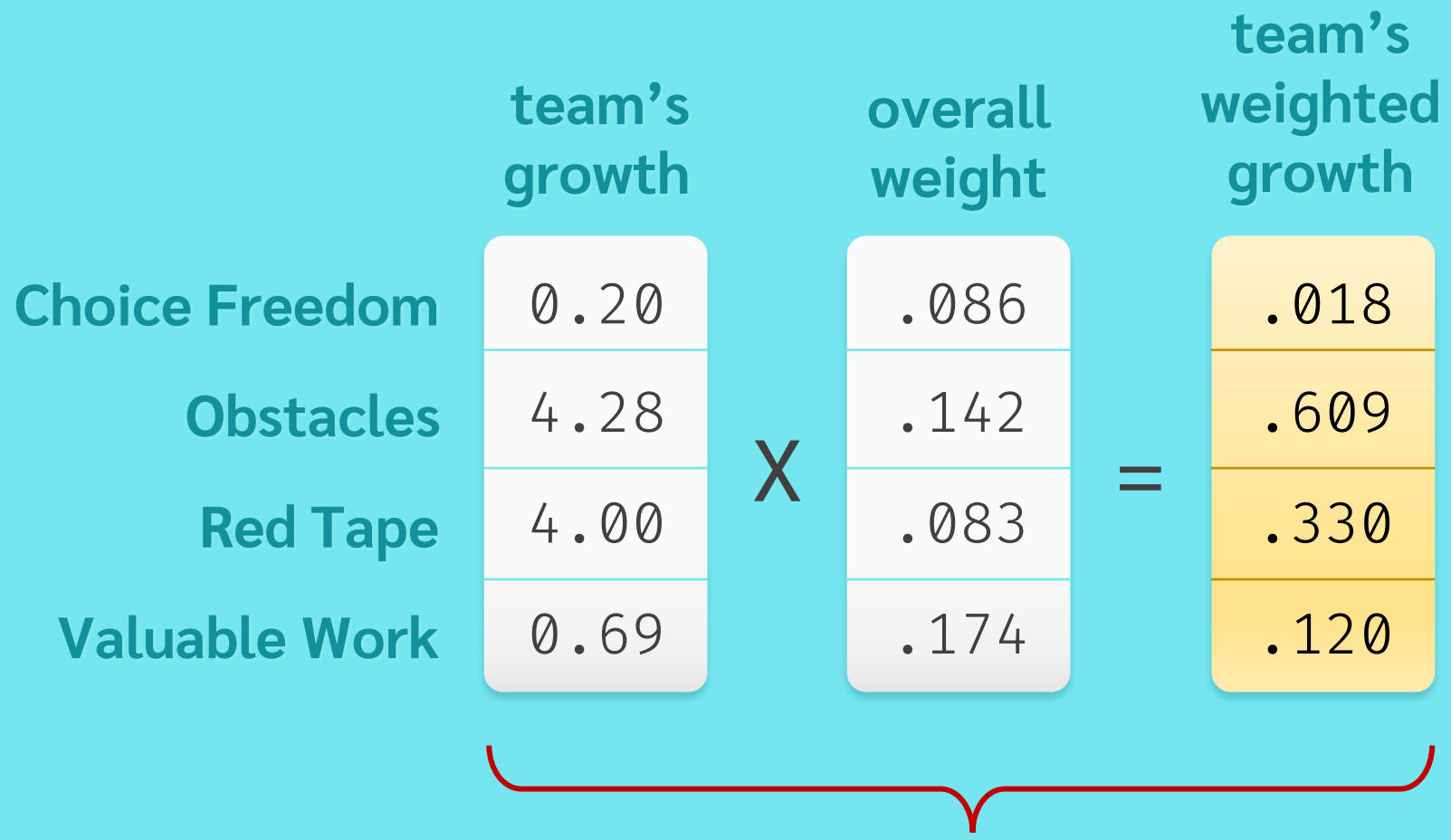
	jobsat	engage	burnout	absolute overall
Choice Freedom	+.087	+.170	−.001	.086
Obstacles	−.115	−.041	+.271	.142
Red Tape	−.061	+.025	+.162	.083
Valuable Work	+.253	+.171	+.099	.174

Coefficients same for all teams

3 RANK

Weigh and rank growth potential using regressions

Calculate weighted growth for every team
Multiply team's growth with overall averaged regression weights



3 RANK

Weigh and rank growth potential using regressions

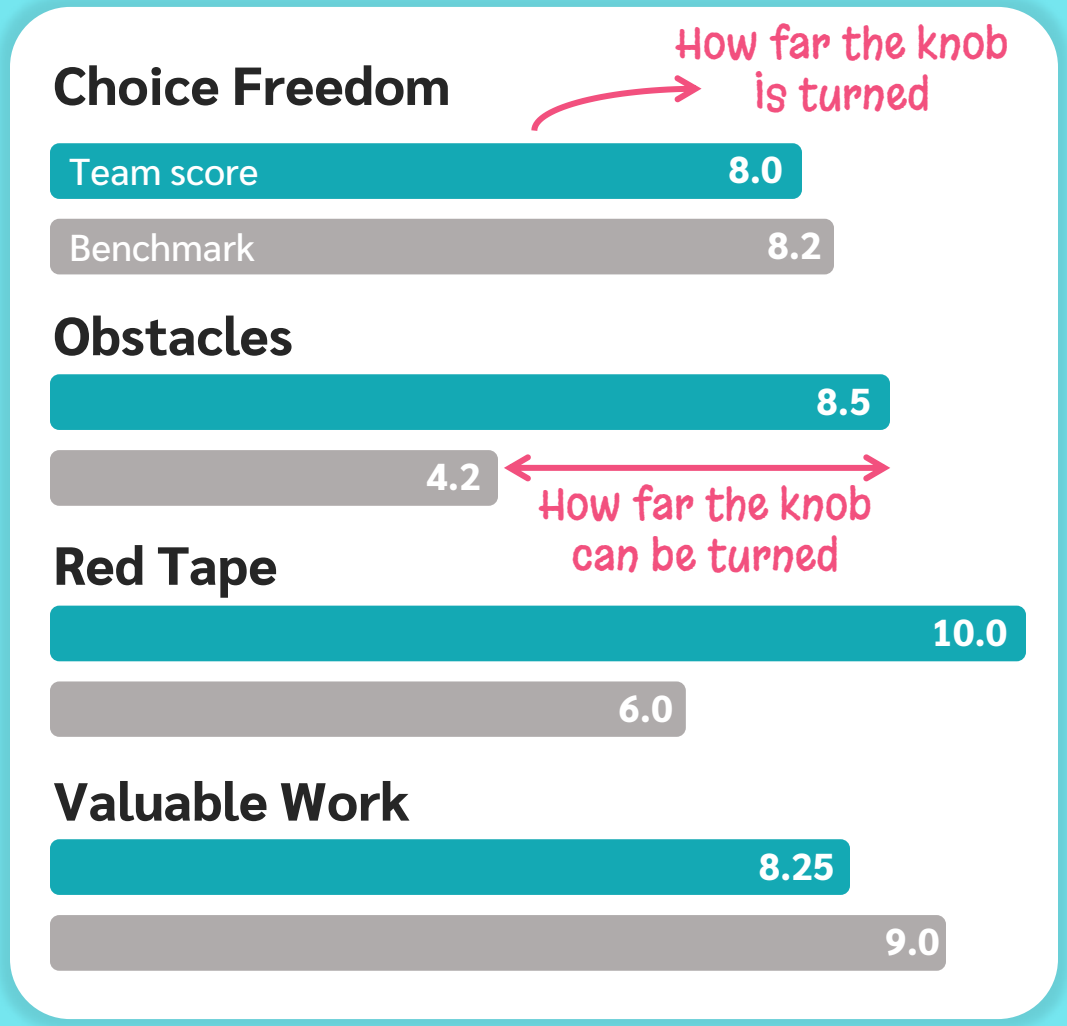
Used for recommended actions

	weighted growth	relative growth	team's ranks
Choice Freedom	.018	1.62%	4
Obstacles	.609	56.53%	1
Red Tape	.330	30.68%	2
Valuable Work	.120	11.17%	3
		sum 100%	

Calculate for every team

4 Recommend

Make actionable shortlists teams can put into practice to realize growth potential



1. **Obstacles**
   Things at work that stand in the way of completing tasks and attaining goals
2. **Red Tape**
   Burdensome and unnecessary rules
3. **Valuable Work**
   Employees' perception that work is personally meaningful and interesting
4. **Choice Freedom**
   Employees' perception they can make decisions in their work

Knobs in order they can best be turned to improve all outcomes the most


DEMO

Discussion

Growth potential provides teams valuable insight into how they can improve important outcomes.

Limitations

- Requires a nesting (teams)
- Fit may vary slightly per team $(\hat{y} - y)$
- Misses granularity due to averaging over coefficients

Future

- Multilevel regression feasible?
- Other approaches?
- ...?

Code and slide deck at:

`https://github.com/iLLucionist/growthp`

Thank you!
Questions?

L. Maxim Laurijssen
l.m.laurijssen@rug.nl
maxim.laurijssen@gmail.com