Introduction to EvalC3 Online

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HARTPURY

REAL Reflect Evaluate Act Learn
Robin Vincent Learning and Evaluation

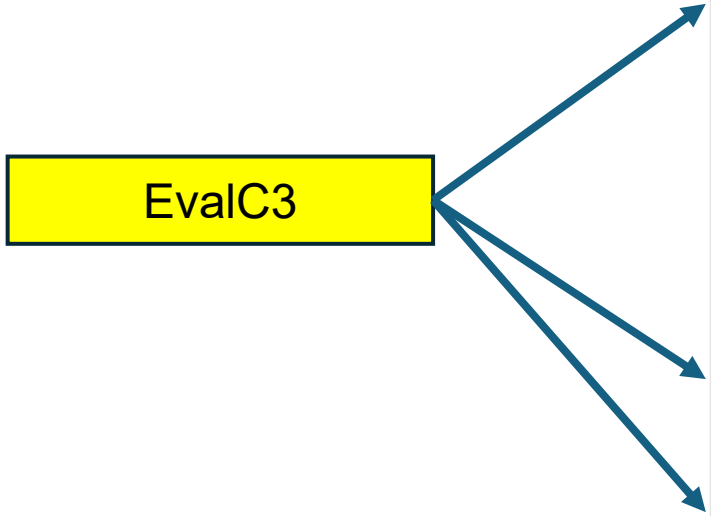
Programme

09.30	Welcome & introductions	
	Objectives & Expectations	
09.45	Where EvalC3 can be useful	
10.00	Data Preparation	
10.20	Break	
10.30	Explore Select Data & Design Pages	
11.10	Break	
11:20	Search Algorithms & Decision Trees	
12.20	Feedback	
12.30	End	

Objectives

1. Understanding of when and where EvalC3 can be useful
2. Ability to navigate the SHU and EvalC3 website
3. Understanding of sequence of the EvalC3 workflow
4. Understanding of requirements and choices available at each stage of the workflow
5. Hands on experiences with the analyses at each stage
6. Identification of potential future uses in their workplace

Uses: Evaluation



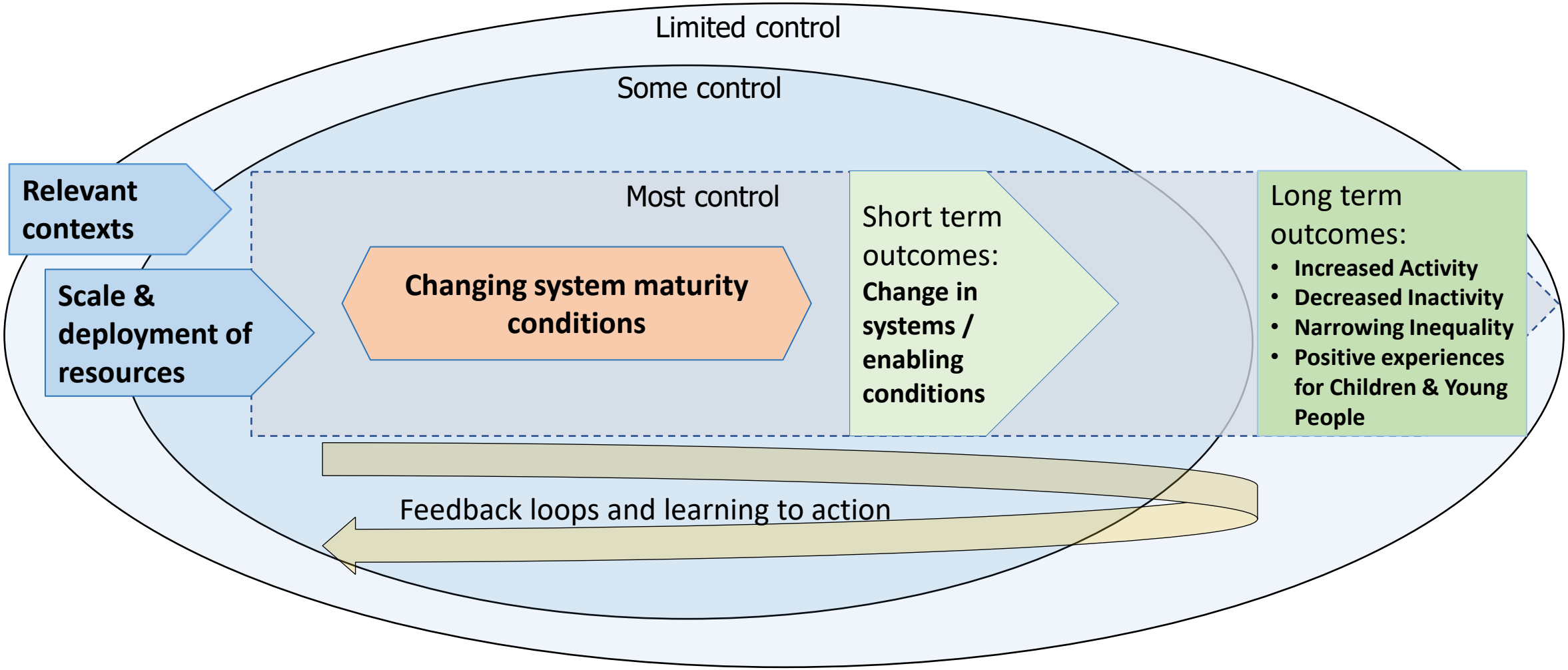
A checklist of types of evaluation questions that can be asked

1: Question types	Description
1. Descriptive	about what happened , when, where when, who. Without this information other questions below can be difficult to answer
2. Valuative	about peoples' assessments of the value and significance of what happened. (aka Normative? , which will then inform choices about where to investigate...
3. Explanatory	about the causes of what happened or what happened as a result of a cause
4. Predictive	about likely consequences of what happened
5. Prescriptive	about what what could or should be done about what happened, or what is expected to happen

Uses: How we can describe the world

- The causes of an effect
  - Which of these causes was associated with an effect of interest?
- The effects of a cause
  - Which of these events were associated with a cause of interest?
- Combinations of causes, not just single causes
  - A&B caused C, but A or B alone did not
- Multiple combinations of causes, each of which will work
  - A&B causes C and D&E causes C
- Asymmetric causes
  - A&B causes C but the absence of A&B does not necessarily mean C does not happen

NELP Theory of Change in complex systems



Data preparation - Dichotomisation

- EvalC3 works with binary data, where each case is assessed for **membership in a set** (fully in = 1, fully out = 0),
- Reduces diverse qualitative or quantitative attributes into binary categories, enabling case comparison.
- Cut-off points are identified where a condition becomes theoretically meaningful to an outcome.

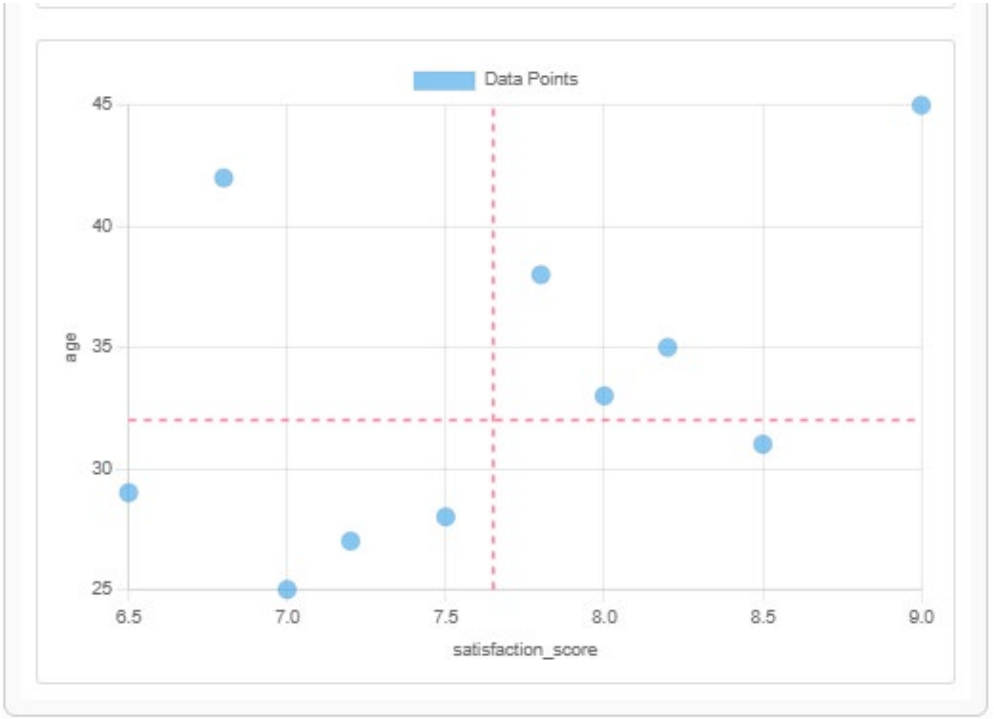
Data preparation - Dichotomisation

Sometimes a binary classification may be more informative than a numerical correlation

The overall correlation here is weak (0.46)

But these manually identified cut-offs identify a good predictive model (80% accuracy), where…

- If the average rating of ”life satisfaction” is above 7.5 then the average age of the respondents is likely to be above 32 years

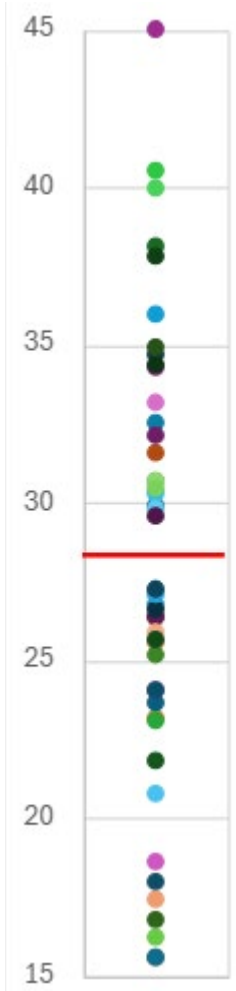


Data preparation - Quantitative

Collect raw data

ID	Deprivation Score
Case 1	29.9
Case 2	23.2
Case 3	38.1
Case 4	36
Case 5	45
Case 6	30.7
Case 7	34.7
Case 8	26.4
Case 9	37.8
Case 10	23.7
Case 11	26.4
Case 12	16.8
Case 13	26.8
Case 14	25.6
Case 15	23.1

Identify cut-off



Assign binary value

=IF(AO2>28, 1, 0)

AO	AP
Deprivation Score	
29.9	1
23.2	0
38.1	1
36	1
45	1
30.7	1
34.7	1
26.4	0
37.8	1
23.7	0
26.4	0

Data preparation - Categorical

Collect raw data

ID	Funding Type
Case 1	Place expansion
Case 2	LDP
Case 3	LDP
Case 4	LDP
Case 5	Place expansion
Case 6	LDP
Case 7	LDP
Case 8	Transition
Case 9	LDP
Case 10	LDP
Case 11	LDP
Case 12	LDP
Case 13	Transition
Case 14	Transition
Case 15	Place expansion

Identify cut-off

LDP

or

Non - LDP

Assign binary value

Binary
0
1
1
1
0
1
1
0
1
1
1
1
0
0
0

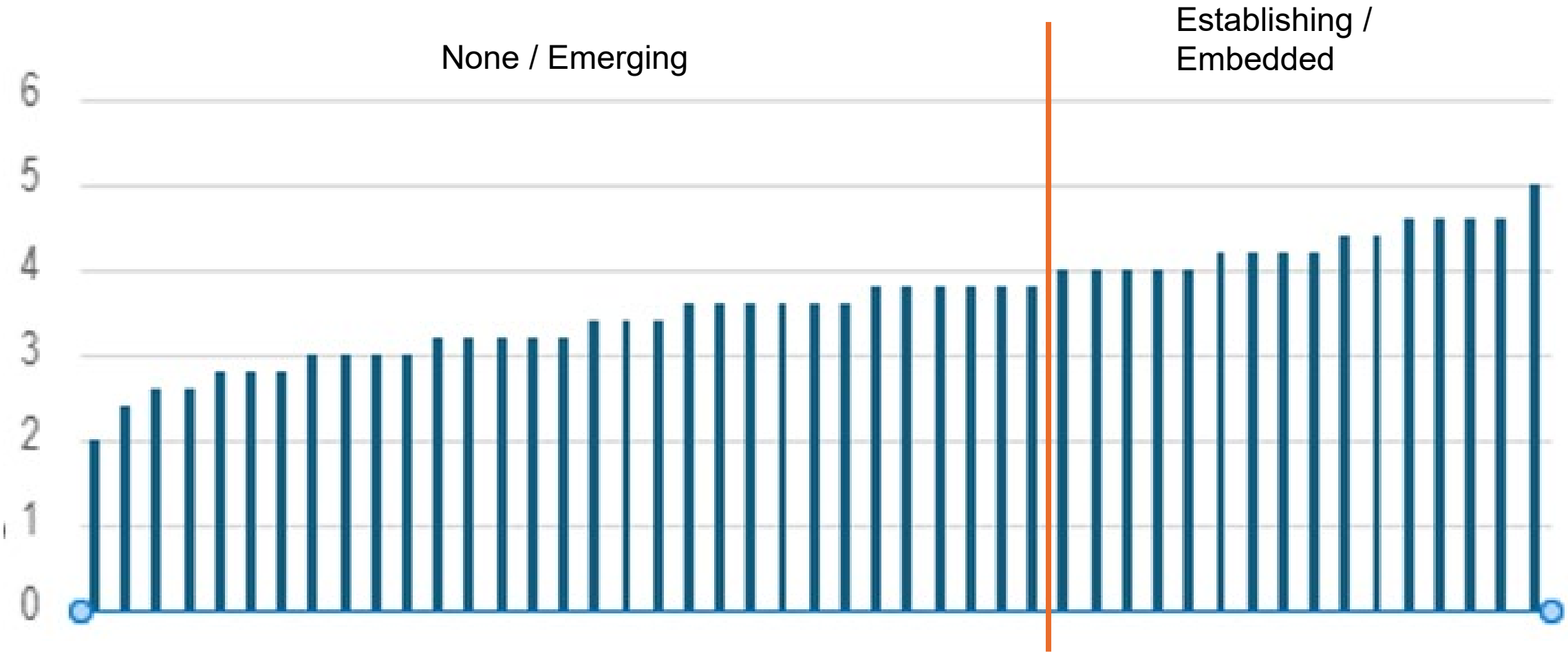
Data preparation - Qualitative

Collect raw data

	No change	*Emerging in practice*		*Establishing in practice*		*Embedded in practice*	
	1	2	3	4	5	6	7
Strengthening community & individual capacities	**Thriving community sector that works together on physical activity**						
	Limited attention is given to physical activity as part of usual work for Voluntary Community Faith and Social Enterprise (VCFSE) organisations in the place. VCFSE organisations are precarious (i.e. live 'hand to mouth') and/or competitive which **inhibits collaboration**.	**Some** VCFSE organisations **recognise how PA can align with their aims** and are willing to work with others to incorporate physical activity into their work and widen reach to those who may be inactive. These efforts tend to be **time limited and/or are bound to external funding**. (i.e. Efforts to incorporate physical activity is intermittent / sporadic).		**Many** VCFSE organisations recognise **how PA can align with their aims**. They are supported and willing to work with others to incorporate physical activity into their work and widen reach to those who may be inactive. Physical activity is becoming part of **usual practice** for some VCSFE organisations as a way of contributing to their core objectives.		A **network** of VCFSE organisations are working together, with a **common purpose**, and with other place-based agencies to build physical activity into usual work, widen reach to those underserved and pool resources. For example, faith-based organisations work with community development charities and local sports clubs to encourage young people to maintain their education.	

Data preparation - Qualitative

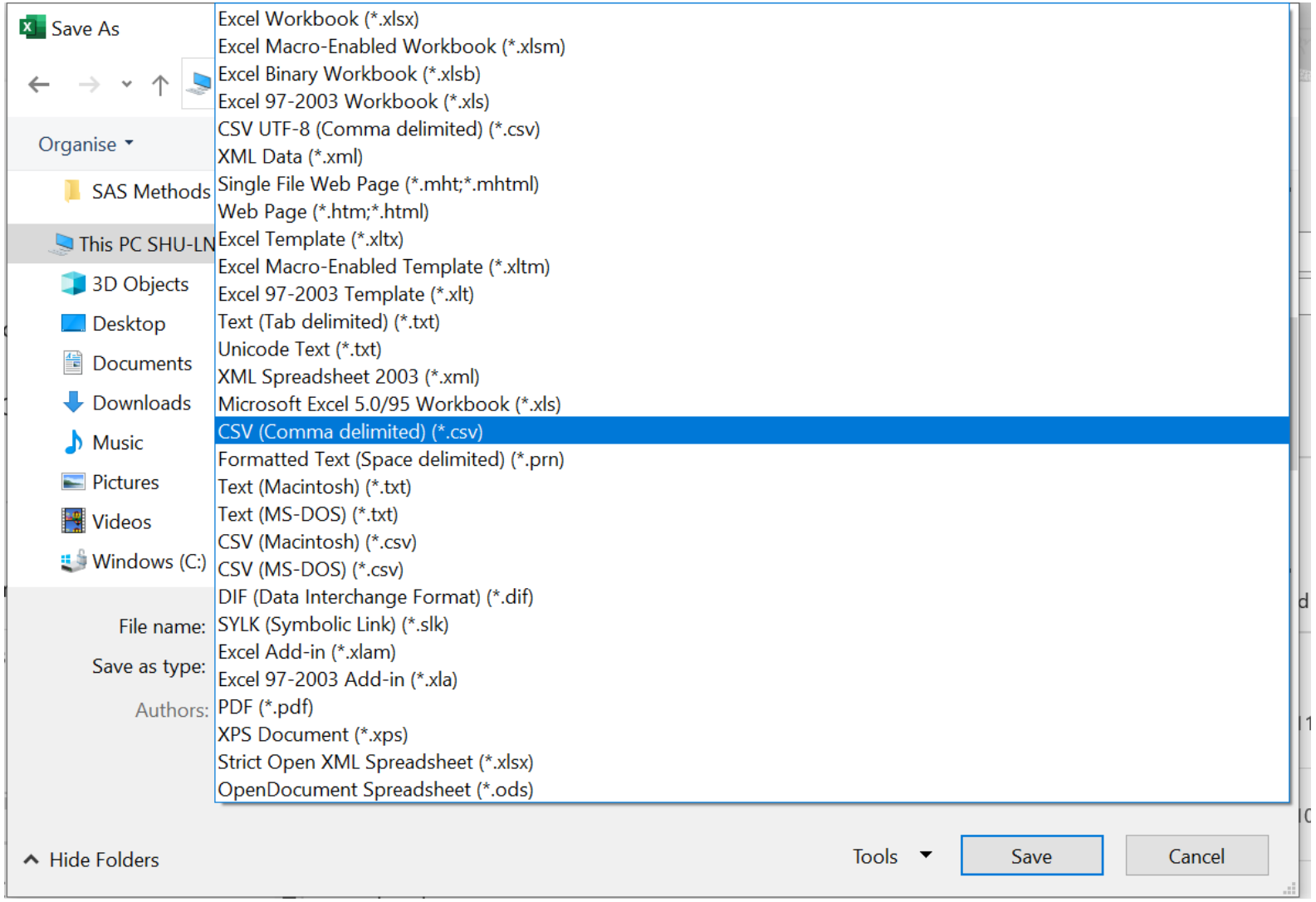
Identify cut-off



Data preparation - Example

	A	B	C	D	E	F
1	ID	Population Density	% Population from ethnic minorities	Median Age	Deprivation score	Inactivity
2	Place 1	0	0	1	1	1
3	Place 2	0	0	1	0	1
4	Place 3	0	1	0	1	1
5	Place 4	0	0	1	0	0
6	Place 5	0	0	1	1	0
7	Place 6	0	0	1	0	0
8	Place 7	0	0	1	1	1
9	Place 8	1	1	0	1	1
10	Place 9	0	0	1	1	1
11	Place 10	1	0	1	1	1
12	Place 11	0	0	0	0	0
13	Place 12	0	0	1	0	0
14	Place 13	1	1	0	1	0
15	Place 14	0	0	1	0	0
16	Place 15	0	0	0	1	0
17	Place 16	1	1	0	1	1
18	Place 17	1	1	0	1	1

Data preparation - Example

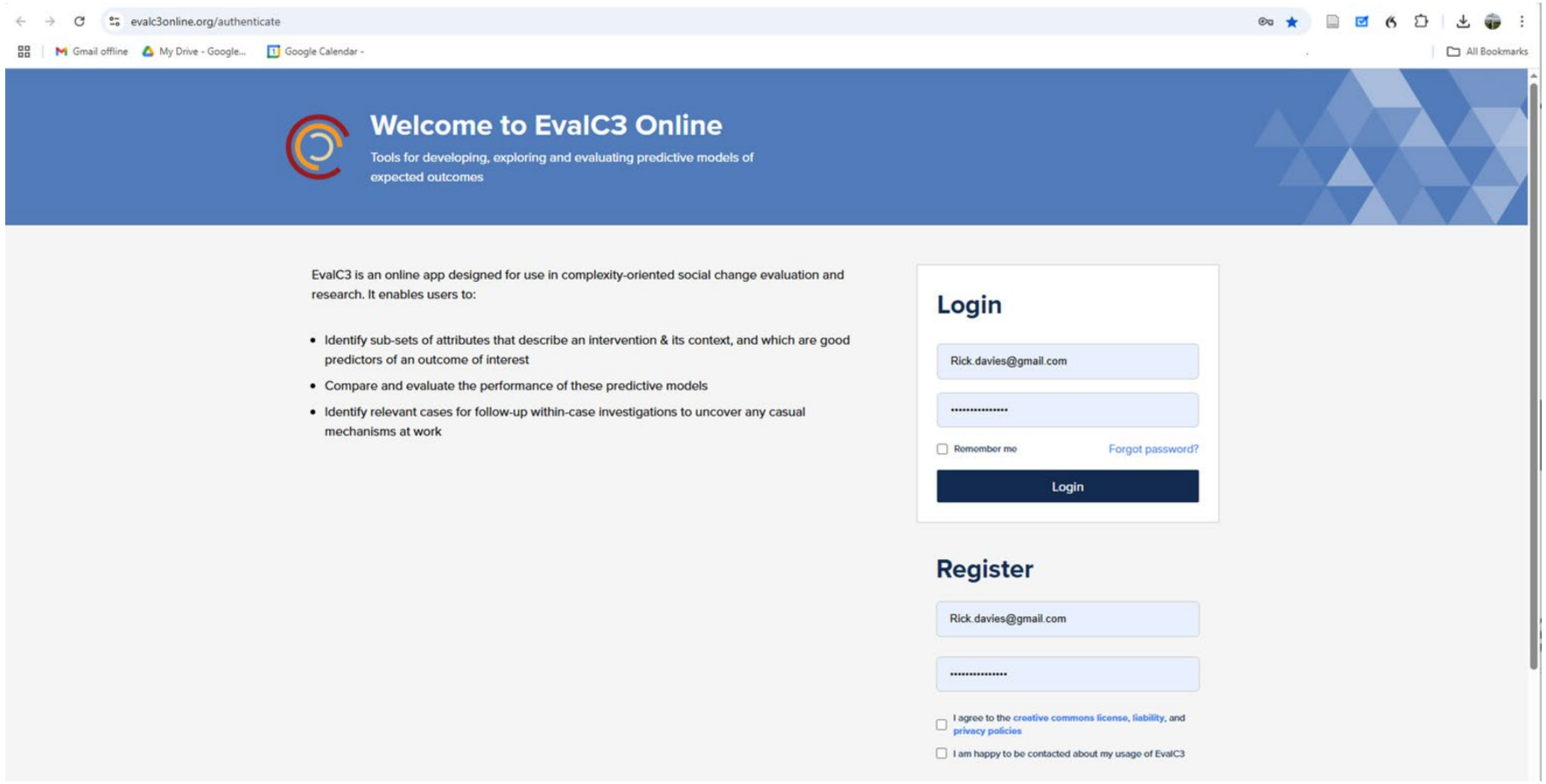


Example Files

https://tinyurl.com/4fsrfj4x

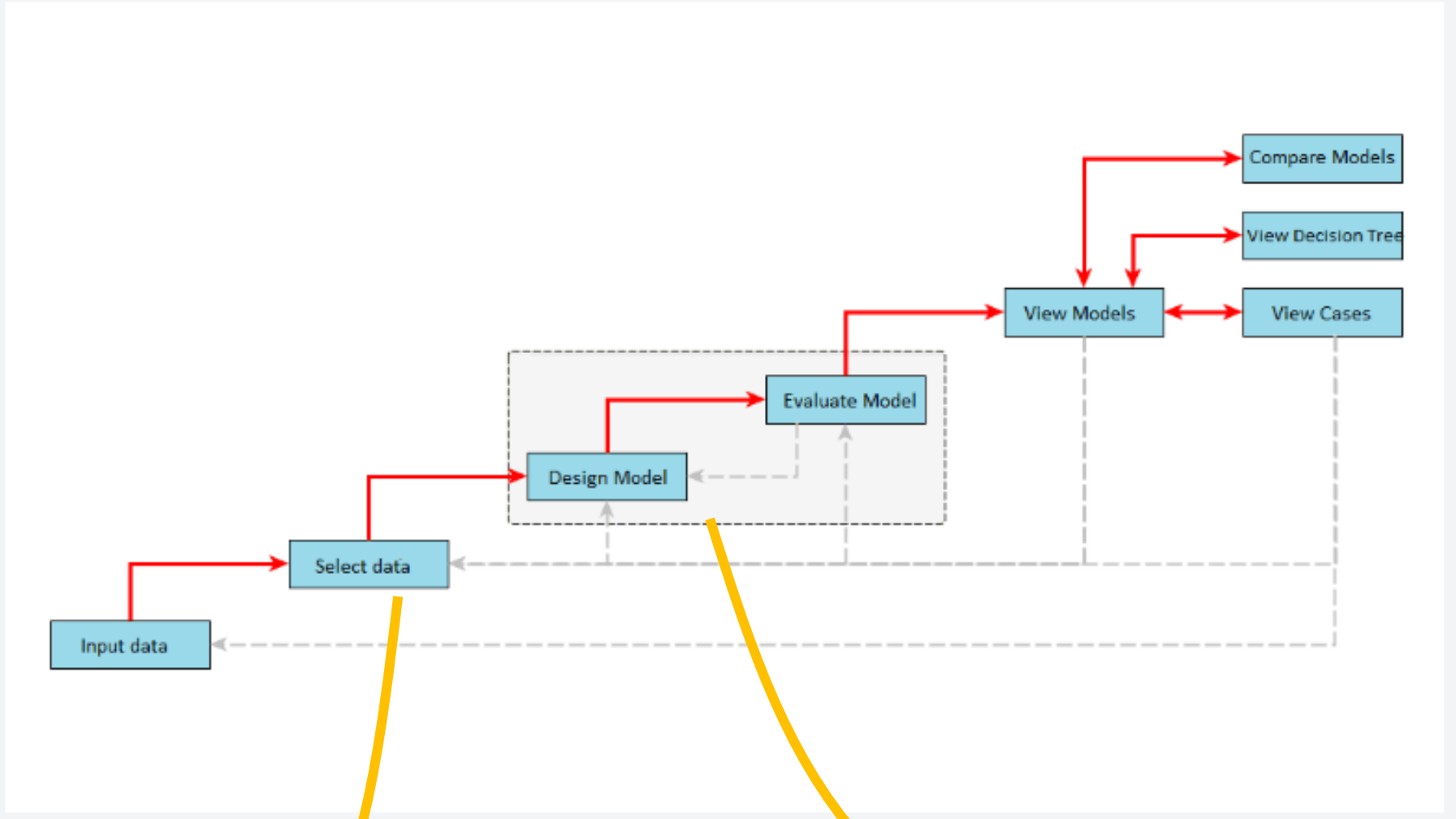
Navigation 1: Where to start

https://evalc3online.org/



Navigation 2: The Flow Chart

Overview



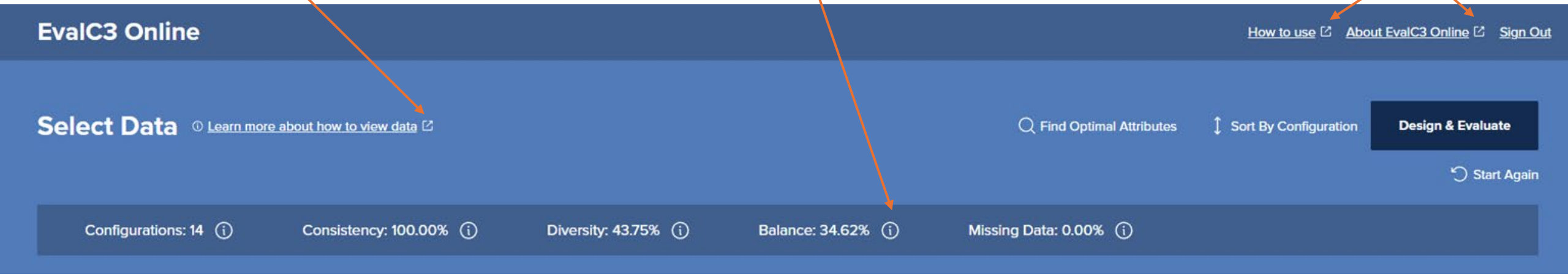
Within page view

Navigation 3: Sources of help

Whole page help

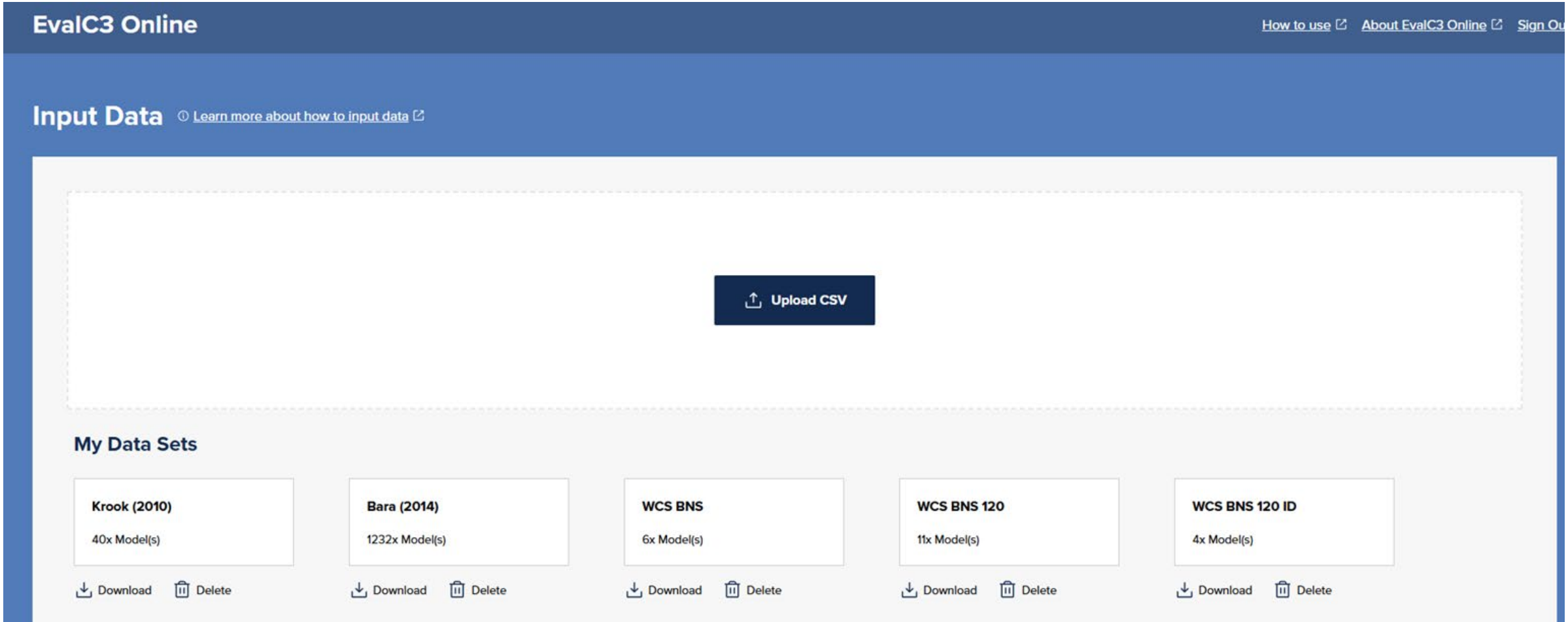
Item help

Site help



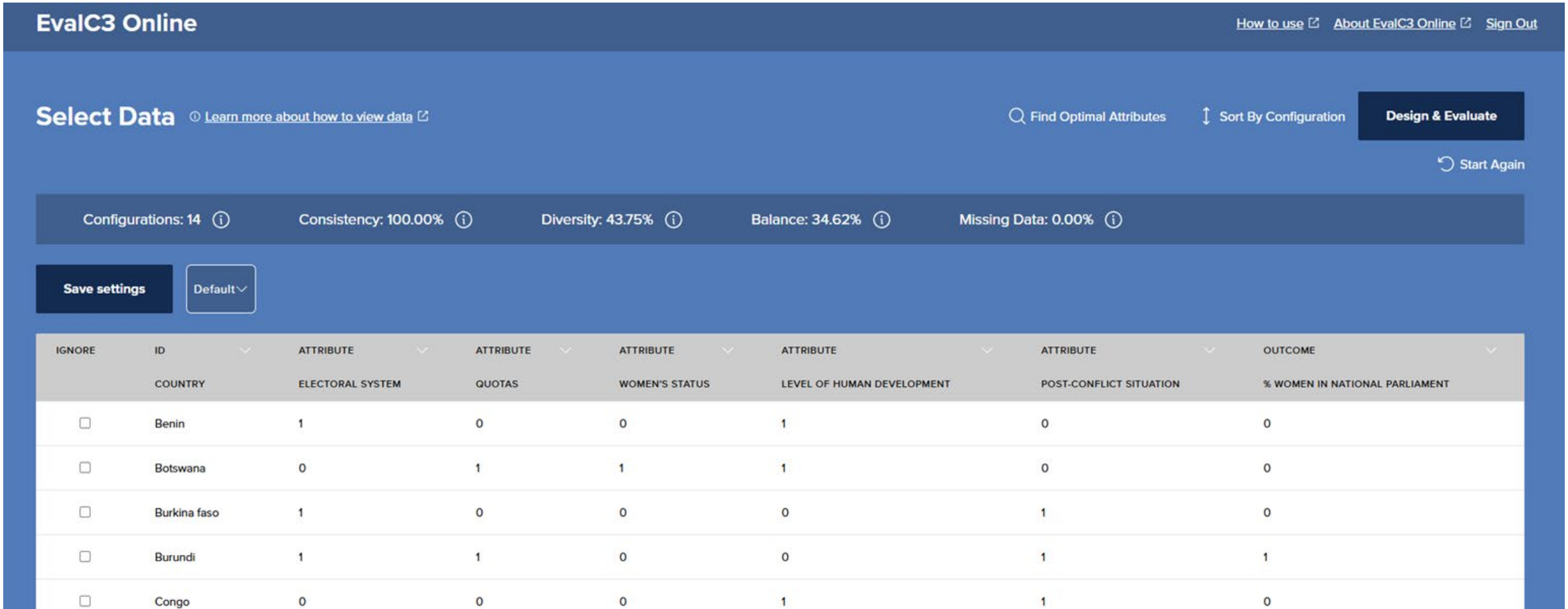
Input Data screen

- Download and examine the CSV file format
- Load the Example data
- Visit the Help page



Select Data screen

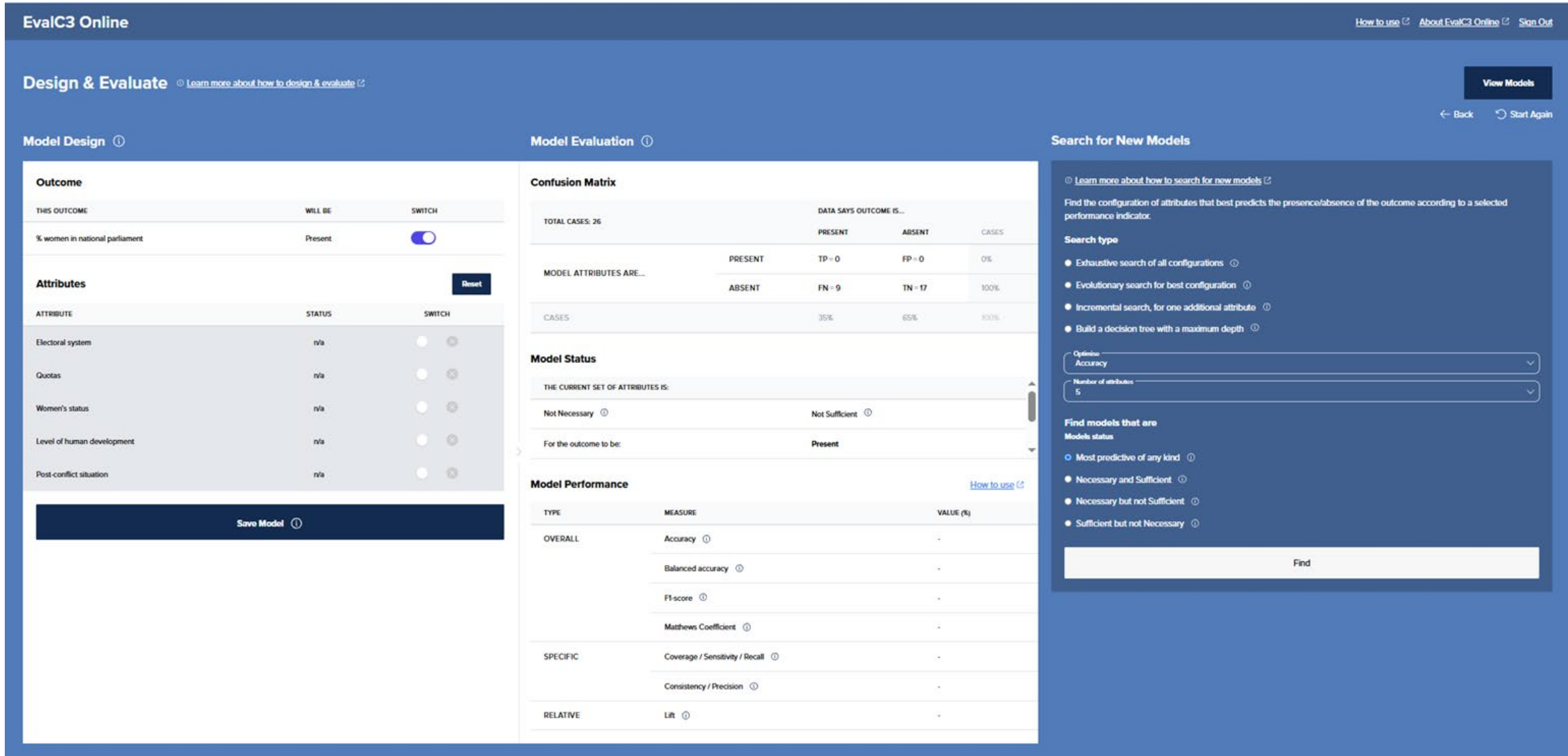
- Change the status of case attributes
- Save these settings
- Sort configurations
- Click on Design & Evaluate



IGNORE	ID	ATTRIBUTE	ATTRIBUTE	ATTRIBUTE	ATTRIBUTE	ATTRIBUTE	OUTCOME
	COUNTRY	ELECTORAL SYSTEM	QUOTAS	WOMEN'S STATUS	LEVEL OF HUMAN DEVELOPMENT	POST-CONFLICT SITUATION	% WOMEN IN NATIONAL PARLIAMENT
☐	Benin	1	0	0	1	0	0
☐	Botswana	0	1	1	1	0	0
☐	Burkina faso	1	0	0	0	1	0
☐	Burundi	1	1	0	0	1	1
☐	Congo	0	0	0	1	1	0

Design & Evaluate

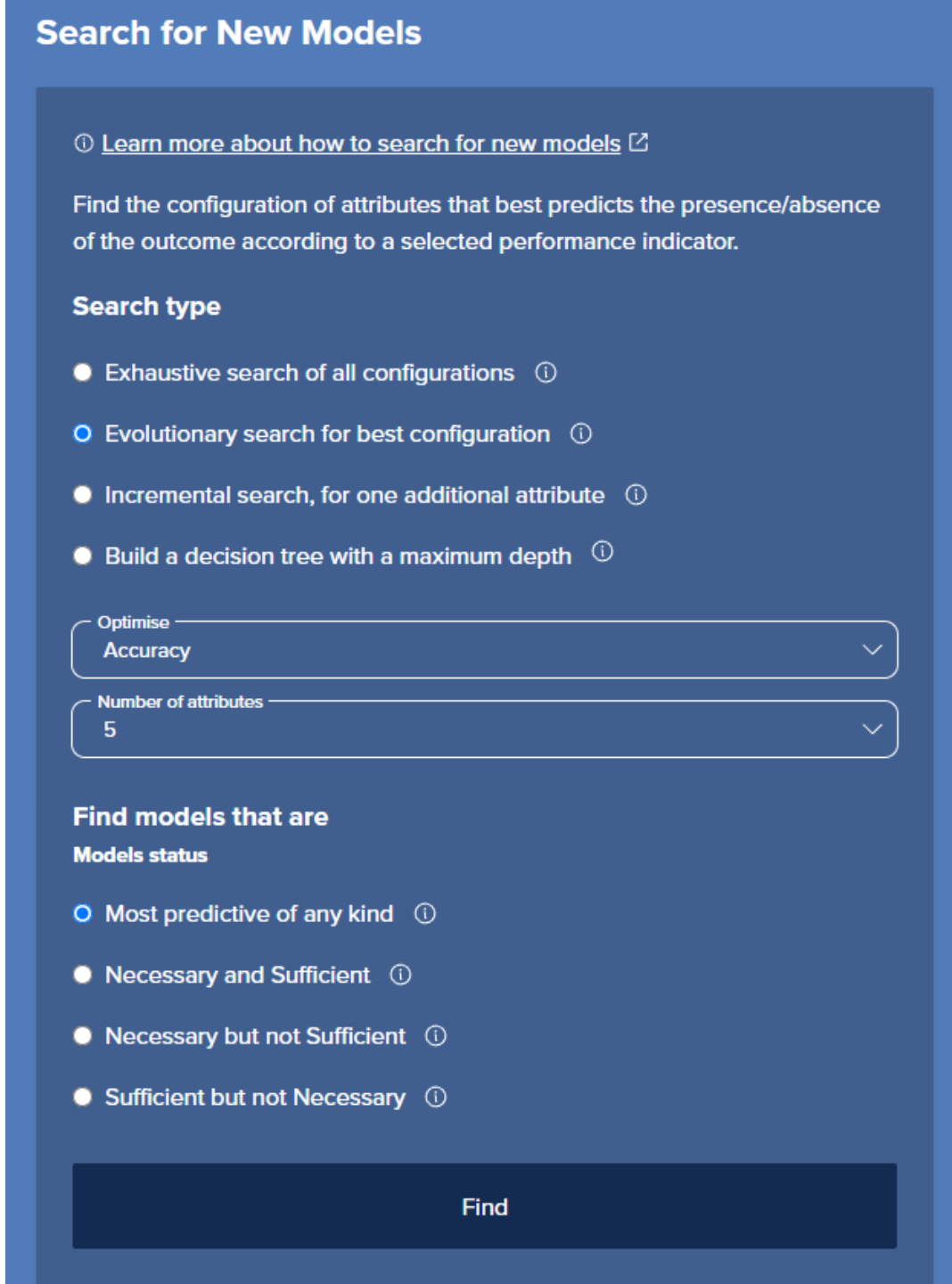
- Vary the Design settings
- Watch the Evaluation measures
- Search for information



Break

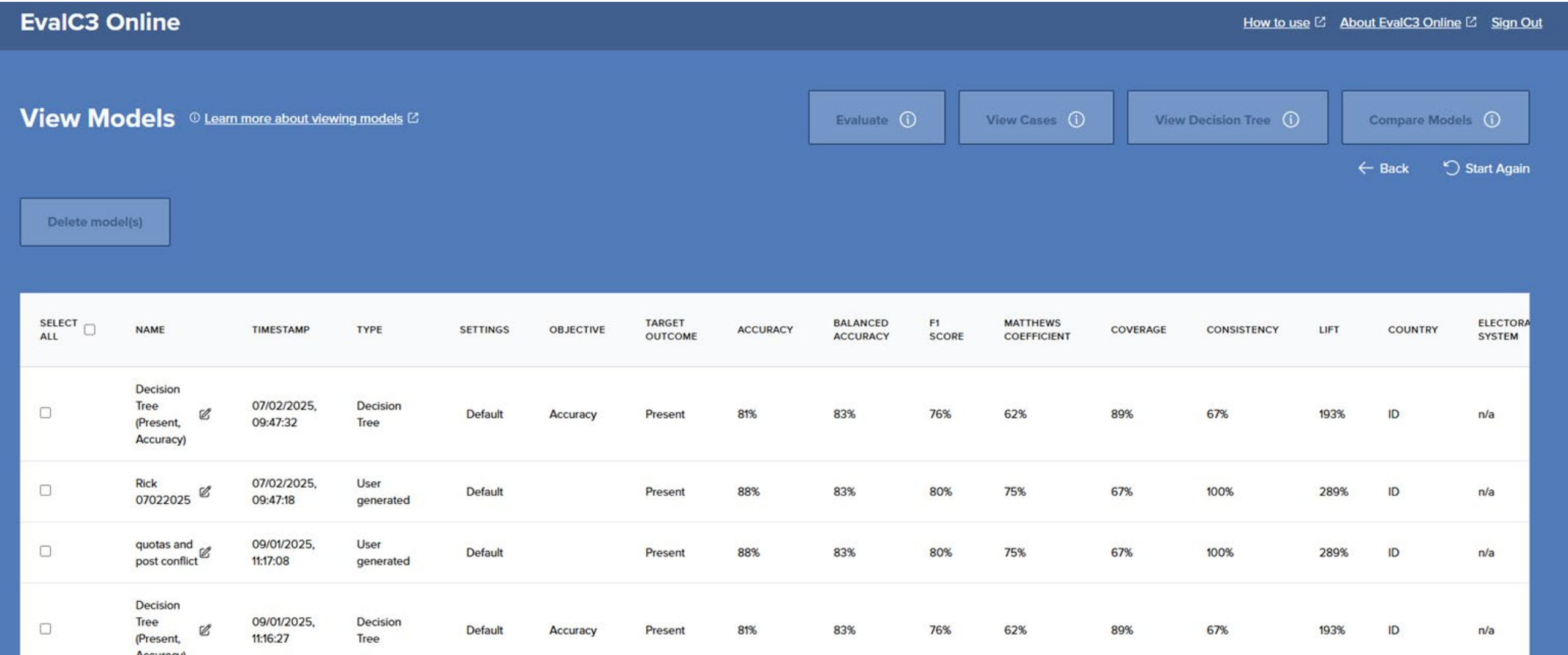
Search algorithms

- Try the exhaustive search, using existing settings



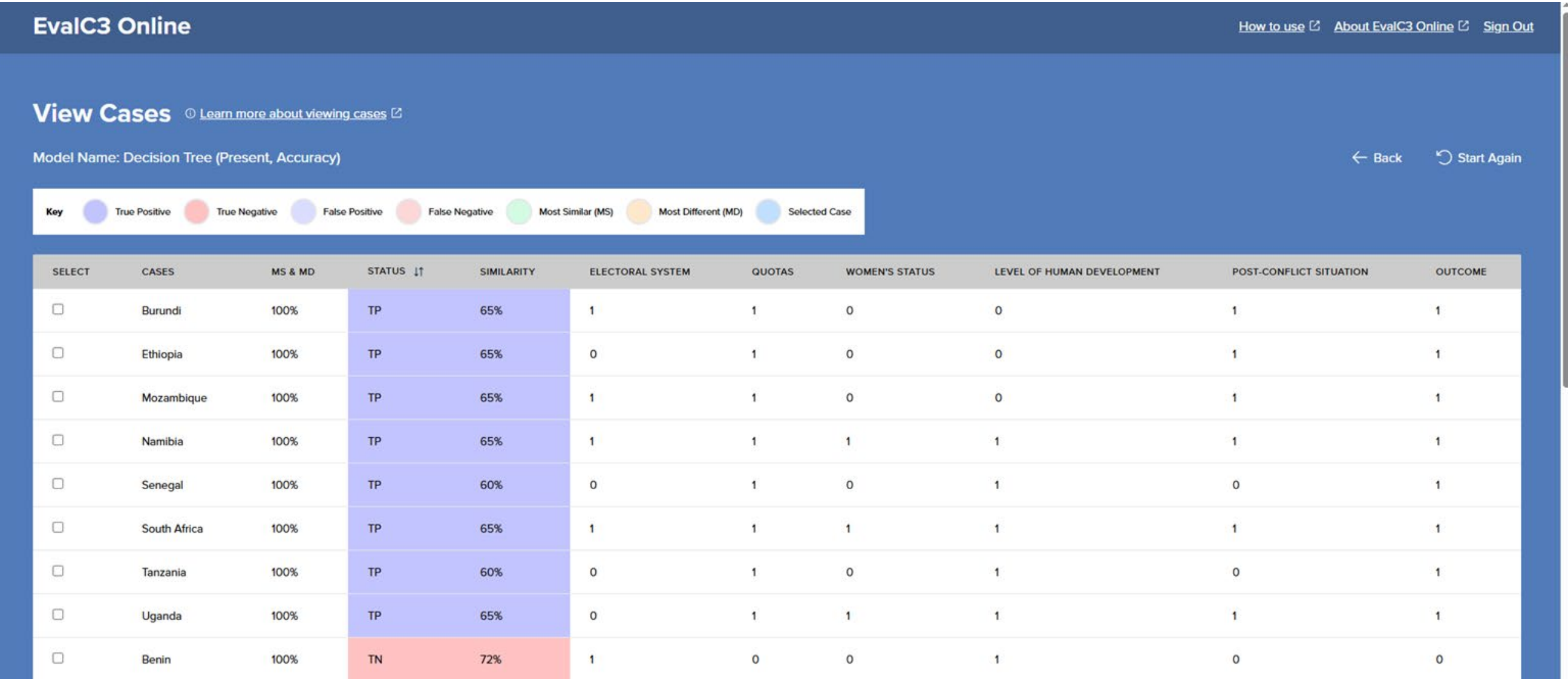
View Models

- Vary selections &
- Observe effect on next options



View cases

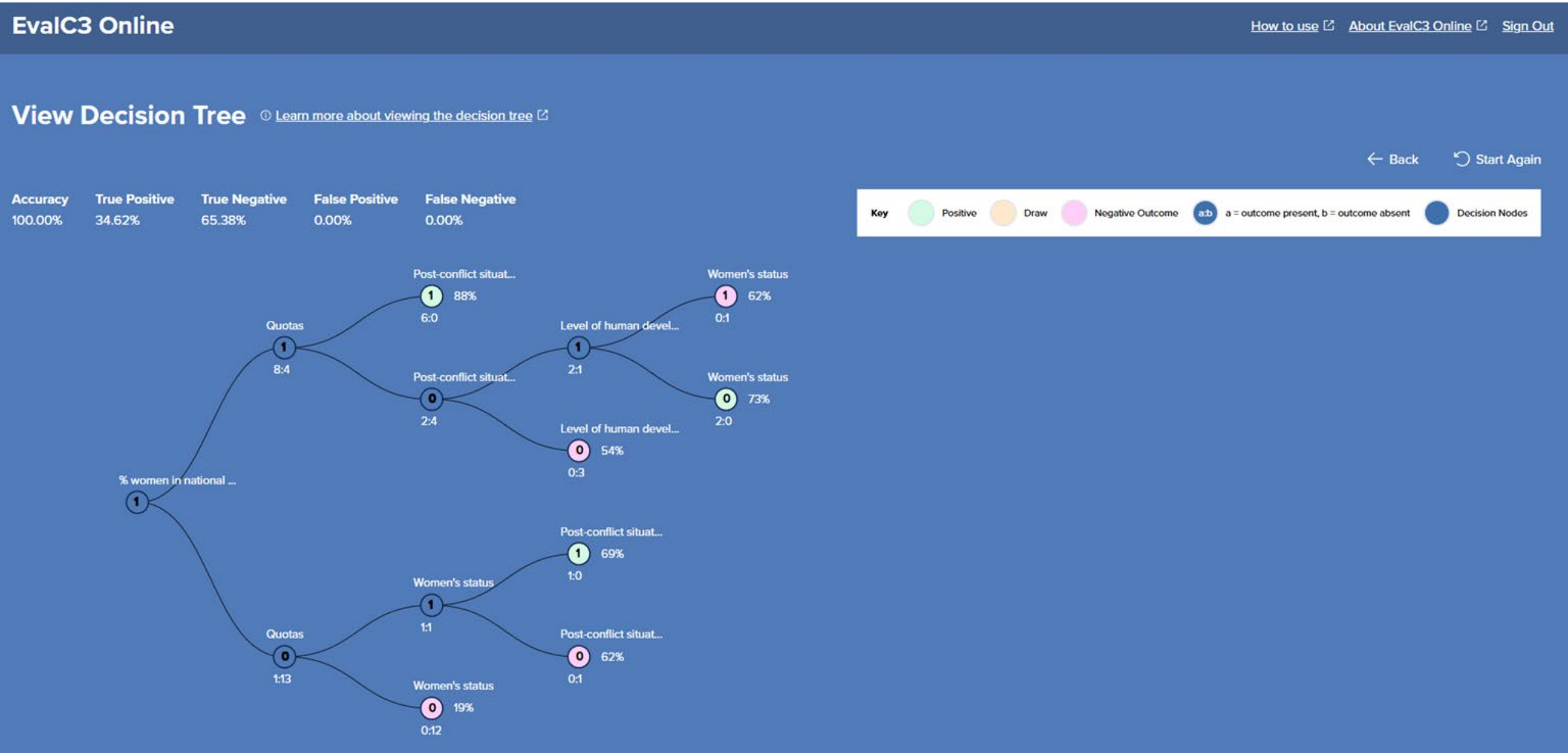
- Explore Select function



SELECT	CASES	MS & MD	STATUS	SIMILARITY	ELECTORAL SYSTEM	QUOTAS	WOMEN'S STATUS	LEVEL OF HUMAN DEVELOPMENT	POST-CONFLICT SITUATION	OUTCOME
☐	Burundi	100%	TP	65%	1	1	0	0	1	1
☐	Ethiopia	100%	TP	65%	0	1	0	0	1	1
☐	Mozambique	100%	TP	65%	1	1	0	0	1	1
☐	Namibia	100%	TP	65%	1	1	1	1	1	1
☐	Senegal	100%	TP	60%	0	1	0	1	0	1
☐	South Africa	100%	TP	65%	1	1	1	1	1	1
☐	Tanzania	100%	TP	60%	0	1	0	1	0	1
☐	Uganda	100%	TP	65%	0	1	1	1	1	1
☐	Benin	100%	TN	72%	1	0	0	1	0	0

Decision Tree models

- Can you get here?
- Describe a single configuration



Using EvalC3 in practice

Potential use cases

- What questions?
  - What hypotheses?
- What kinds of data?
- What sources?
- Who would want to see the results?
- Description / prediction / explanation

Feedback

https://forms.office.com/e/mCRQL0YYNN

EvalC3 Training Feedback Form