

CROWDSOURCED, CONTINUOUS, AUTOMATED SYSTEMATIC REVIEWS?

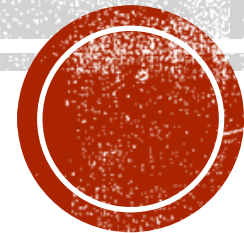
Dr. Janet Martin

Associate Professor, Department of Anesthesia & Perioperative Medicine and

Department of Epidemiology & Biostatistics

Director, Centre for Medical Evidence, Decision Integrity & Clinical Impact (MEDICI)

University of Western Ontario CANADA



MEDICI



**Medical Evidence
Decision Integrity
Clinical Impact**

Contextualized Assessment



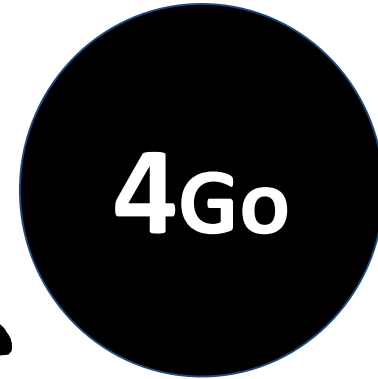
Evidence
Synthesis



Cost-
effectiveness



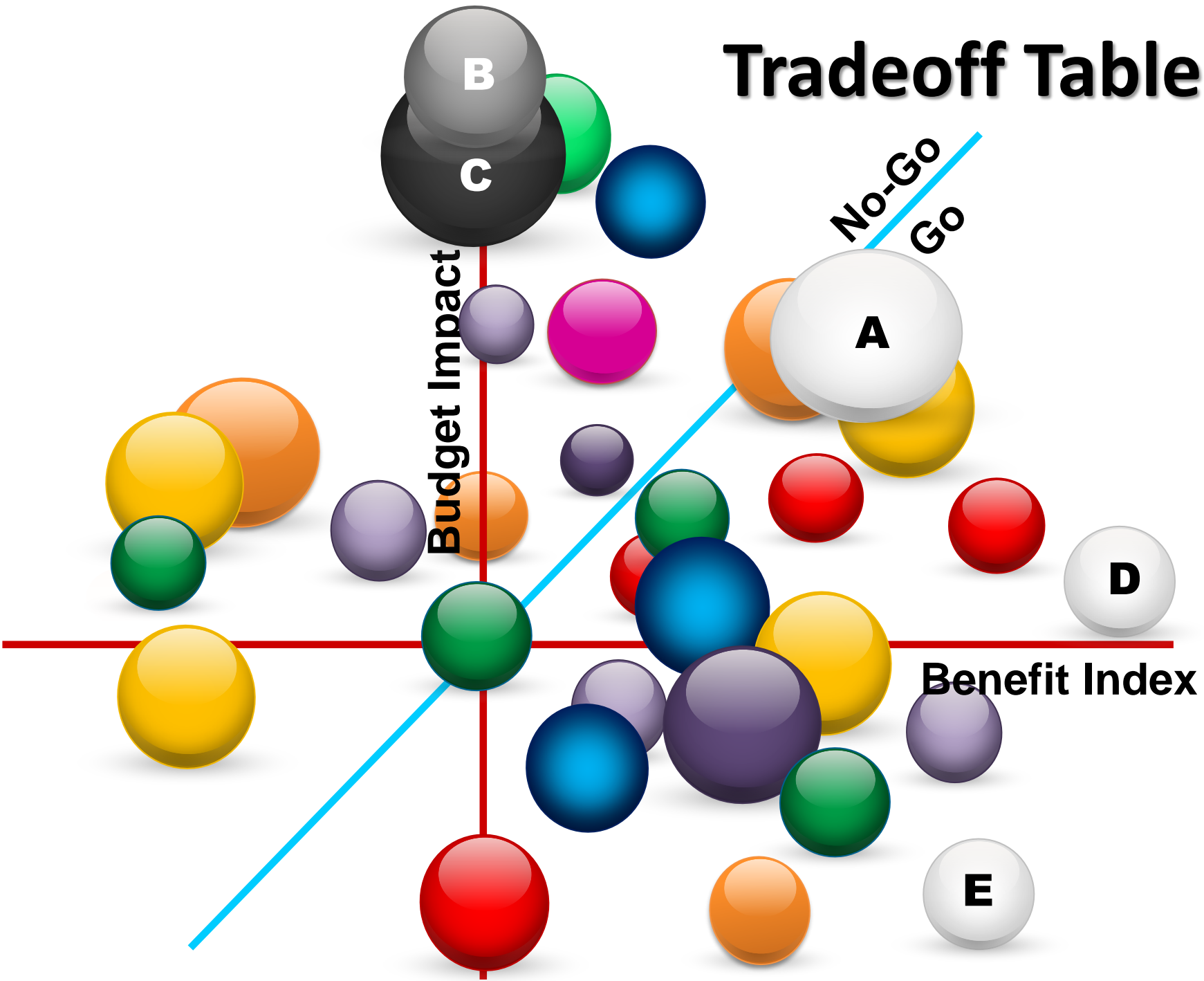
SLEEPERS



Opportunity Cost

Know4Go

Tradeoff Table



**LET'S FACE IT. WE HAVE AN
UNREASONABLE HAYSTACK:NEEDLE RATIO**



HONESTLY...THE IRONY!



**IT'S ALWAYS TOO SOON.
UNTIL IT'S TOO LATE**



SPEED IS GREAT.

- Speed is great.
- Unless you are moving in the wrong direction.



- Rapid, and Wrong?



COGNITIVE BIASES FURTHER ENTRENCHED

Cognitive biases can be organized into four categories: biases that arise from too much information, not enough meaning, the need to act quickly, and the limits of memory

- ANCHOR BIAS
- AVAILABILITY (RECENCY + FREQUENCY + MEMORABILITY) BIAS
- PRECONEIVED Notion



What authors DO

Identify the issue and determine the question

Write a plan for the review
(protocol)

Search for studies

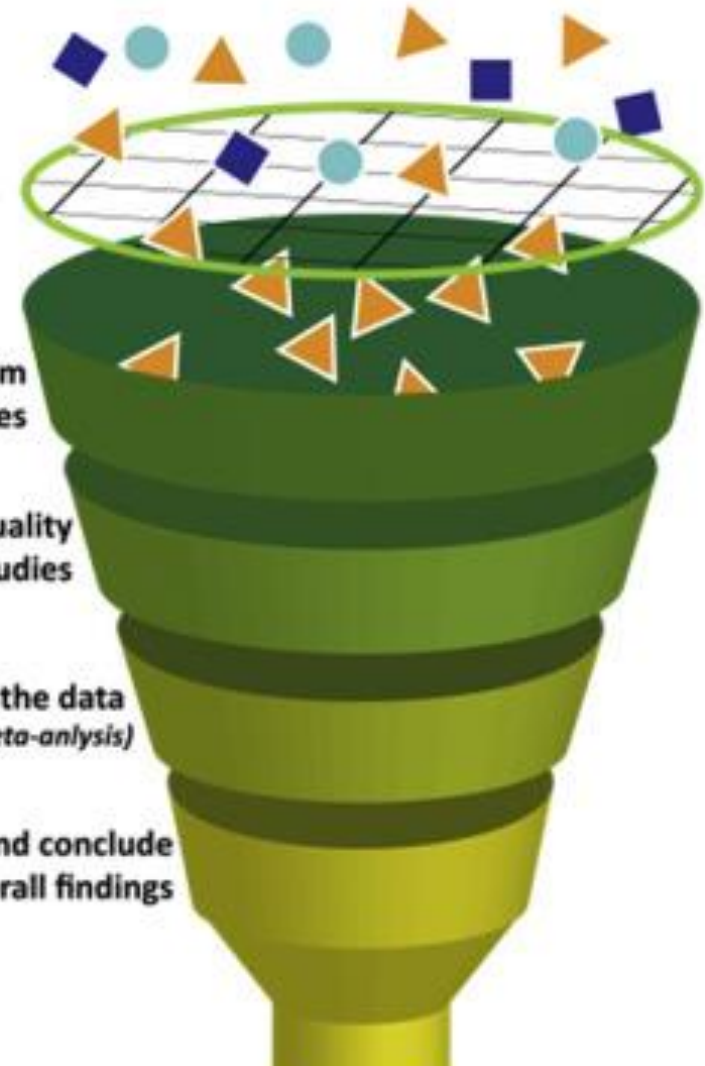
Sift and select studies

Extract data from the studies

Assess the quality of the studies

Combine the data
(synthesis or meta-analysis)

Discuss and conclude overall findings



TerMine +
EPPIreviewer Automated Term
Recognition (~20% reduction in time)

SR Assistant-Deduplication
Module (SRA-DM)

Abstrackr

Rayyan

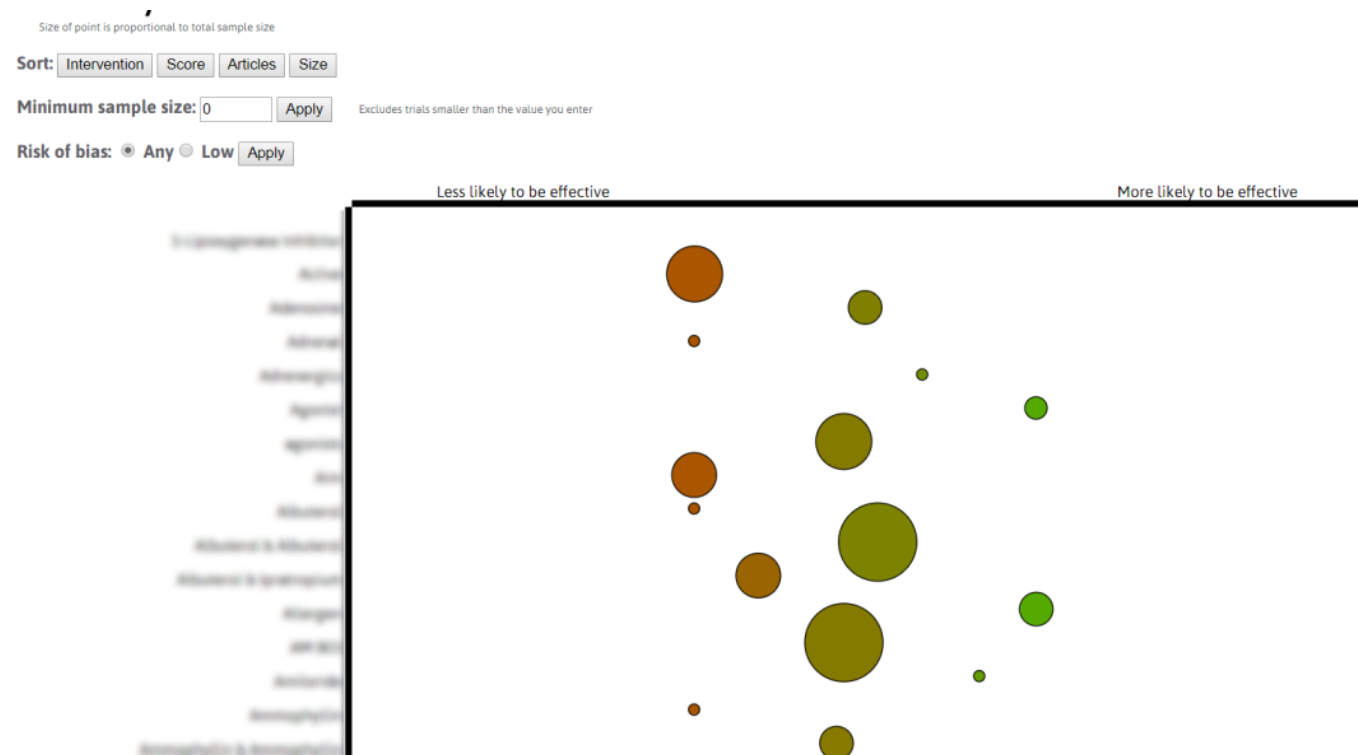
Robot
Reviewer

TripDatabase
Rapid Reviews



Abstrackr

TRIP DATABASE & KCONNECT (EC FUNDED)



To orientate you:



DO RAPID REVIEWS APPROXIMATE SR-MA?

- Over 35 rapid vs comprehensive reviews
- For example: Ebola Virus Disease

- Will use these results from our research program to inform a diagnostic study:
 - **Index test:** Rapid Review Approach
 - **Reference standard:** Systematic Review

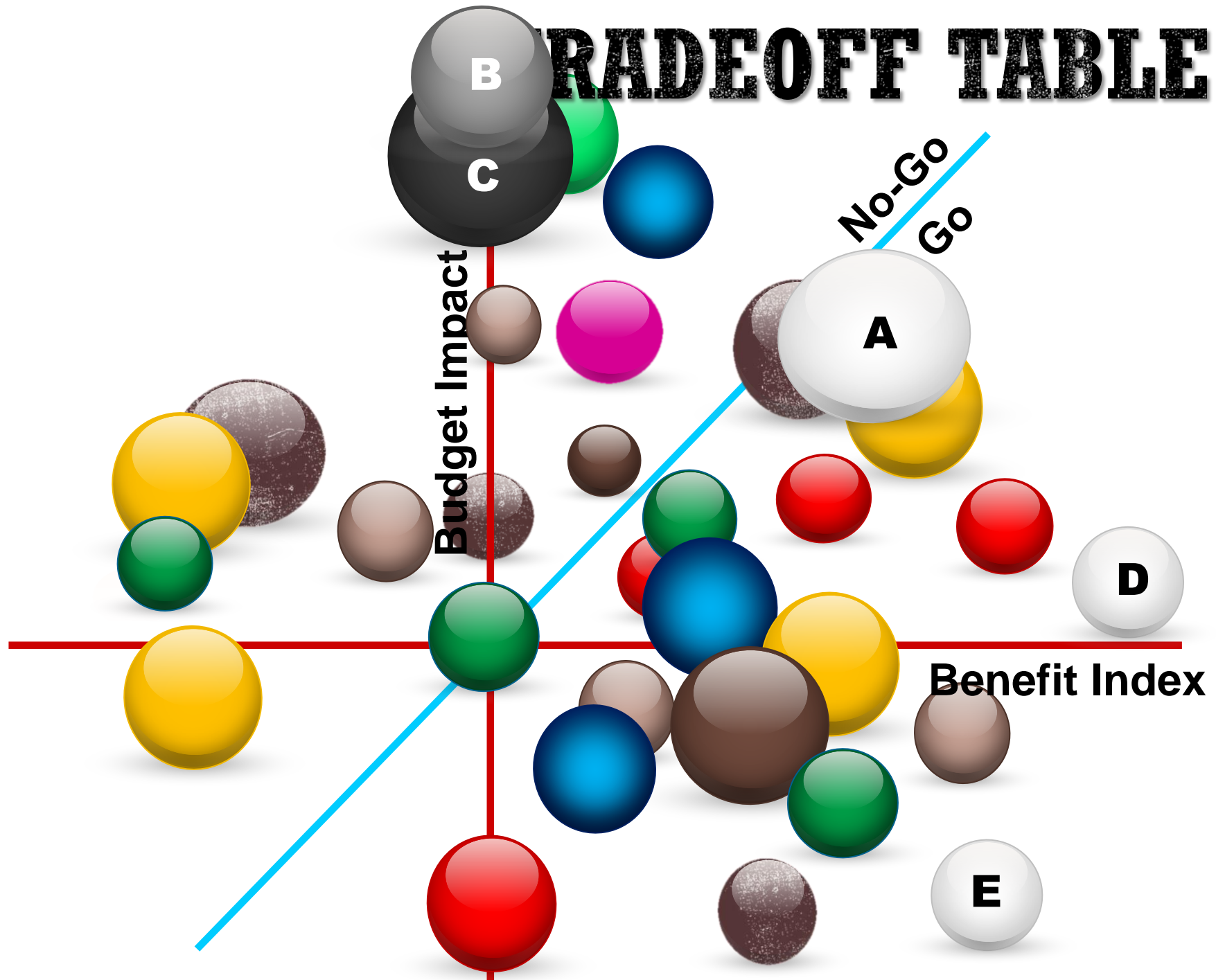


NEXT STEPS (WHILE AWAITING AUTOMATION)

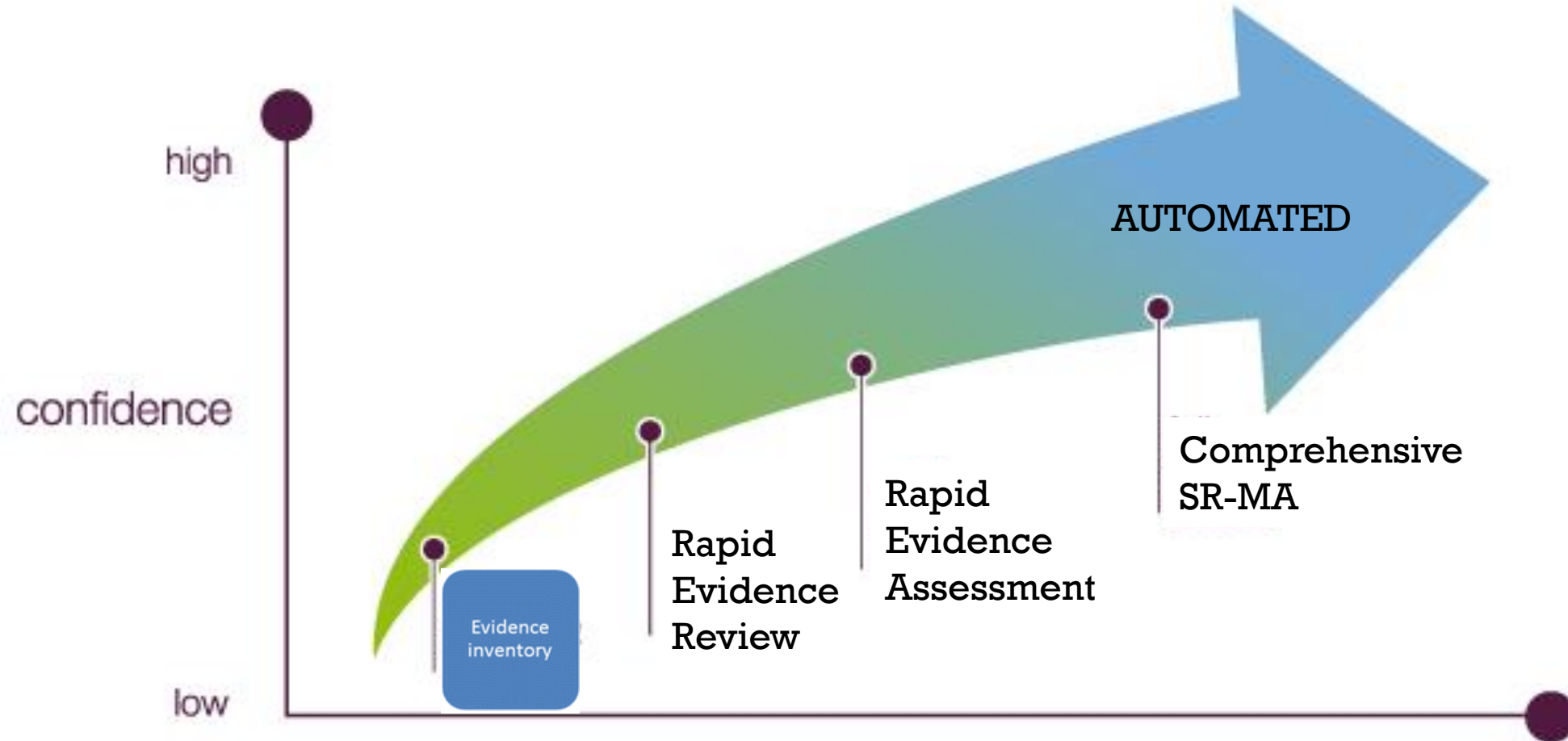
- Comprehensive reviews
- Crowd-sourced
- Continuous
- “On call” meta-marathons



TRADEOFF TABLE



“RAPID SR” IS A CONTINUUM





MEDICI



**Medical Evidence
Decision Integrity
Clinical Impact**