

MASTERING THE SYSTEMATIC REVIEW DAY - 1 WORKSHOP

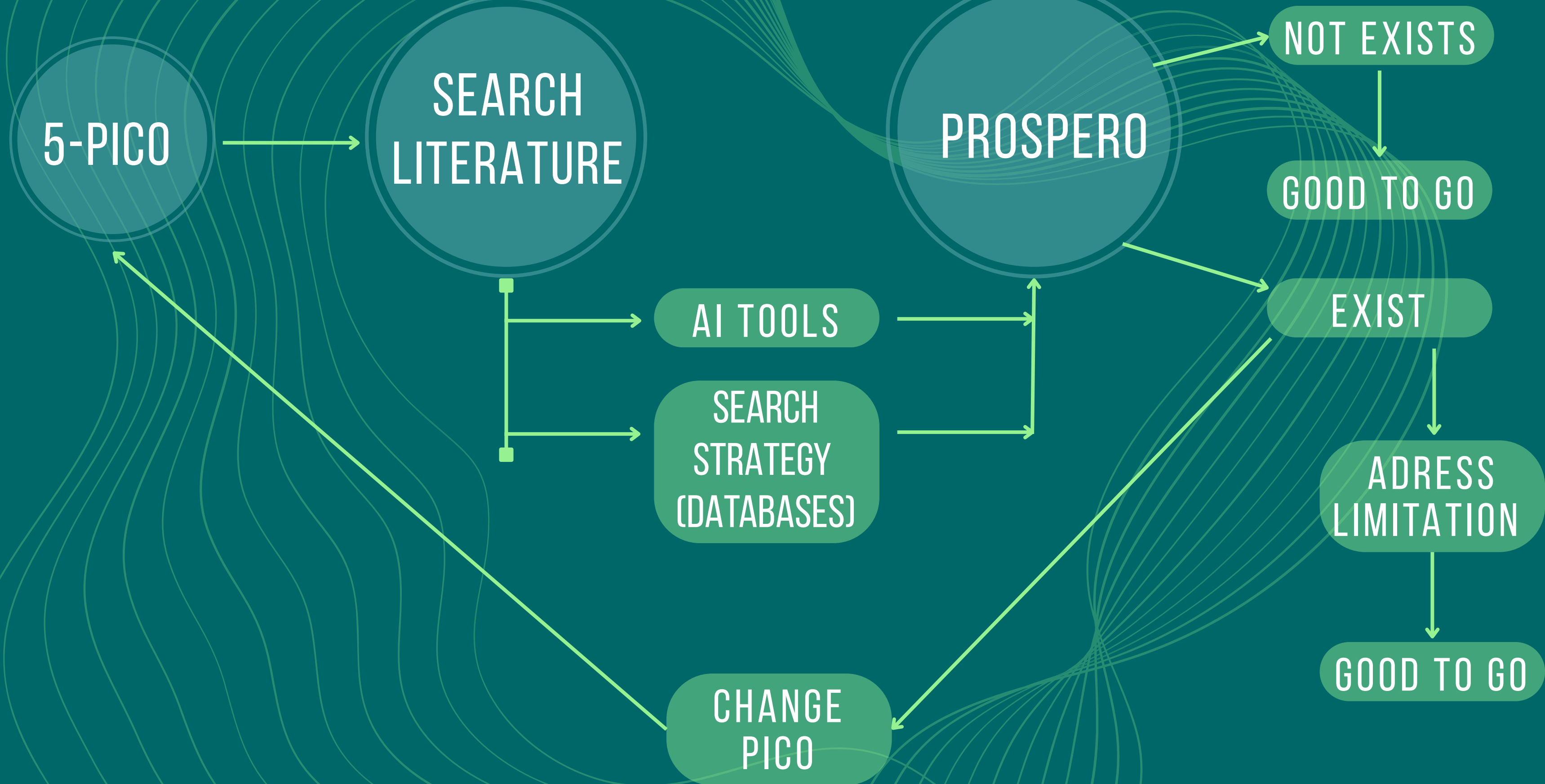
TODAYS TARGET

FINAL PICO QUESTION FOR YOUR SYSTEMATIC REVIEW

WHY WE NEED A SYSTEMATIC REVIEW?

**CAN WE MAKE A PICO
QUESTION WITH ANY RANDOM
P,I,C,O OR THERE NEEDS TO BE
ANY RELATION BETWEEN
THEM?**

**SO HOW CAN WE FINALISE
THE PICO QUESTION? HOW DO
WE KNOW IF THERE IS ANY
INTERRELATION BETWEEN
P,I,C AND O?**



PICO

QUESTION - WHY BROAD QUESTIONS RUIN REVIEWS?

- **UNMANAGEABLE SCOPE**
- **IMPOSSIBLE META-ANALYSIS**
- **RISK OF BIAS**

FLAWED/BROAD POPULATION

EXAMPLE -

ELDERLY



ELDERLY WITH DIABETES HAVING
AGE 50-65

YOUR TASK

- "PATIENTS WITH CANCER"
- "ELDERLY PEOPLE"
- "CHILDREN"
- "PREGNANT WOMEN"
- "PEOPLE WITH PAIN"

INTERVENTION (I) – FROM FUZZY TO EXACT

EXAMPLE -

EXERCISE



30-MINUTE AEROBIC CYCLING AT
70% MAX HR, 3X/WEEK

YOUR TASK

- "HEALTHY DIET"
- "PSYCHOLOGICAL THERAPY"
- "MEDICATION"
- "ALTERNATIVE MEDICINE"
- "SURGICAL TECHNIQUE"

COMPARISON (C) – FROM WEAK TO MEANINGFUL

EXAMPLE -

NO TREATMENT



USUAL PHYSICAL ACTIVITY (NO
STRUCTURED EXERCISE)

YOUR TASK

- "STANDARD CARE"
- "PLACEBO"
- "OTHER DRUGS"
- "CONSERVATIVE MANAGEMENT"
- "ALTERNATIVE APPROACH"

OUTCOME (O) FROM MUSHY TO MEASURABLE

EXAMPLE -

"PATIENT SATISFACTION"



"PRESS GANEY SURVEY SCORES
≥ 90TH PERCENTILE"

YOUR TASK

- "IMPROVES HEALTH"
- "REDUCES PAIN"
- "BETTER QUALITY OF LIFE"
- "FEWER COMPLICATIONS"
- "COST-EFFECTIVE"



TASK - 1

POPULATION	INTERVENTION	COMPARISION	OUTCOME
1. "PATIENTS WITH CANCER"	1. "HEALTHY DIET"	1. "STANDARD CARE"	1. "IMPROVES HEALTH"
2. "ELDERLY PEOPLE"	2. "PSYCHOLOGICAL THERAPY"	2. "PLACEBO"	2. "REDUCES PAIN"
3. "CHILDREN"	3. "MEDICATION"	3. "OTHER DRUGS"	3. "BETTER QUALITY OF LIFE"
4. "PREGNANT WOMEN"	4. "ALTERNATIVE MEDICINE"	4. "CONSERVATIVE MANAGEMENT"	4. "FEWER COMPLICATIONS"
5. "PEOPLE WITH PAIN"	5. "SURGICAL TECHNIQUE"	5. "ALTERNATIVE APPROACH"	5. "COST-EFFECTIVE"

NARROW/CORRECT EACH OF THEM WITH 3 VARIANTS

JUST MATCH AND OUR PICO IS READY
DEVICES NOT ALLOWED

20
Mins



TEMPLATE FOR TASK 1 IN YOUR PORTAL

20
Mins



TASK - 2

PICO SPEED DATING

- EACH TEAM INTENTIONALLY MAKES 3 PICO QUESTIONS - BUT WITH A FLAW/MISTAKE/GAP
- PAPERS WILL BE EXCHANGED WITH OTHER TEAMS AND THEY WILL CORRECT THE FLAW/MISTAKES/GAP

LEARN IN 2 WAYS ..LEARN FROM MISTAKES OR DO IT YOURSELF

15
Mins

BEFORE USING AI



ON THE GROUND LET'S MAKE SOME REAL ONES

AI PROMPT -

- ASSUME YOURSELF AN EXPERT RESEARCHER AND GIVE ME A PICO QUESTION FOR MEDICAL RESEARCH HAVING METHODOLOGY SYSTEMATIC REVIEW AND THEME _____.
- GIVE ME 5 SUCH PICO QUESTIONS ALONG WITH THE SHORT OVERVIEW OF THE TOPIC.
- MAKE SURE THE PICO QUESTION IS -TRENDING & HAS ENOUGH EXISTING LITERATURE.

IF YOU WANT MORE OPTIONS SIMPLY TYPE GIVE 5 MORE OPTIONS

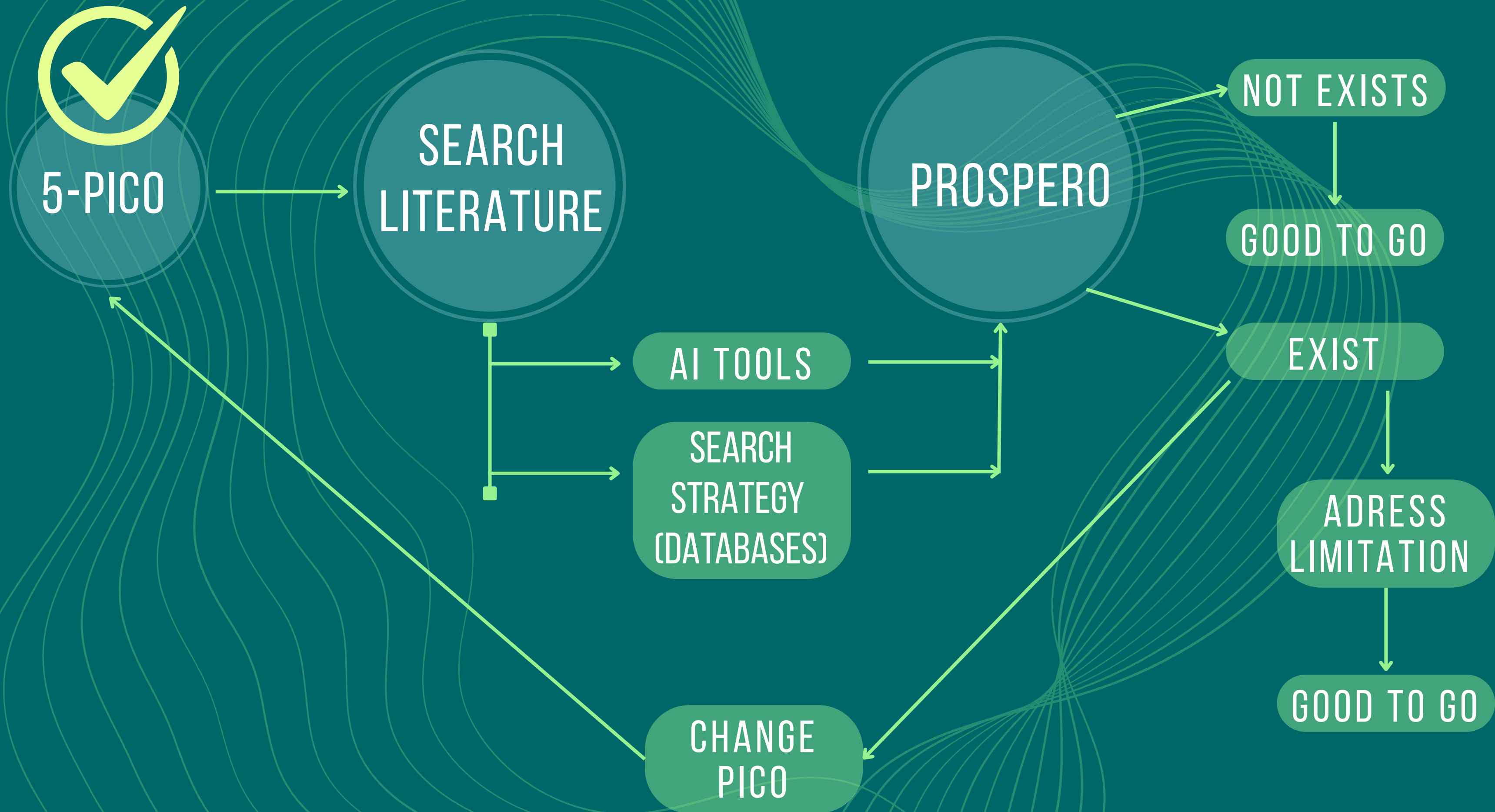
RECOMMENDED TO USE DEEP SEEK WITH SEARCH OPTION ENABLED

20
Mins



**ADD YOUR 5 PICO IN
REPORTING DOCUMENT**

**5
Mins**



SEARCH LITERATURE

WHERE TO SEARCH EXISTING RESEARCH PAPER



DATABASES



AI TOOLS

DATABASES

1 **PUBMED/MEDLINE**

Biomedical and clinical research (especially RCTs)

2 **EMBASE (PAID)**

Pharmacological and European literature

3 **COCHRANE LIBRARY**

High-quality RCTs and existing systematic reviews

4 **SCOPUS**

Multidisciplinary/multimodal research

5 **WEB OF SCIENCE**

Citation analysis and impact tracking

6 **GOOGLE SCHOLAR**

DATABASES

AI PROMPT

Assume you are an expert web data scrapper. I want you to help me run a preliminary search for existing literature for my systematic review on databases

- 1) Pubmed
- 2) Cochrane Library
- 3) Google Scholar

Give filters and search strategy for each.

For each database give 2 strategy. 1) with mesh terms 2) without mesh terms.

**ADD NO. OF PAPERS YOU FOUND ON
EACH DATABASE IN YOUR REPORTING
DOCUMENT**



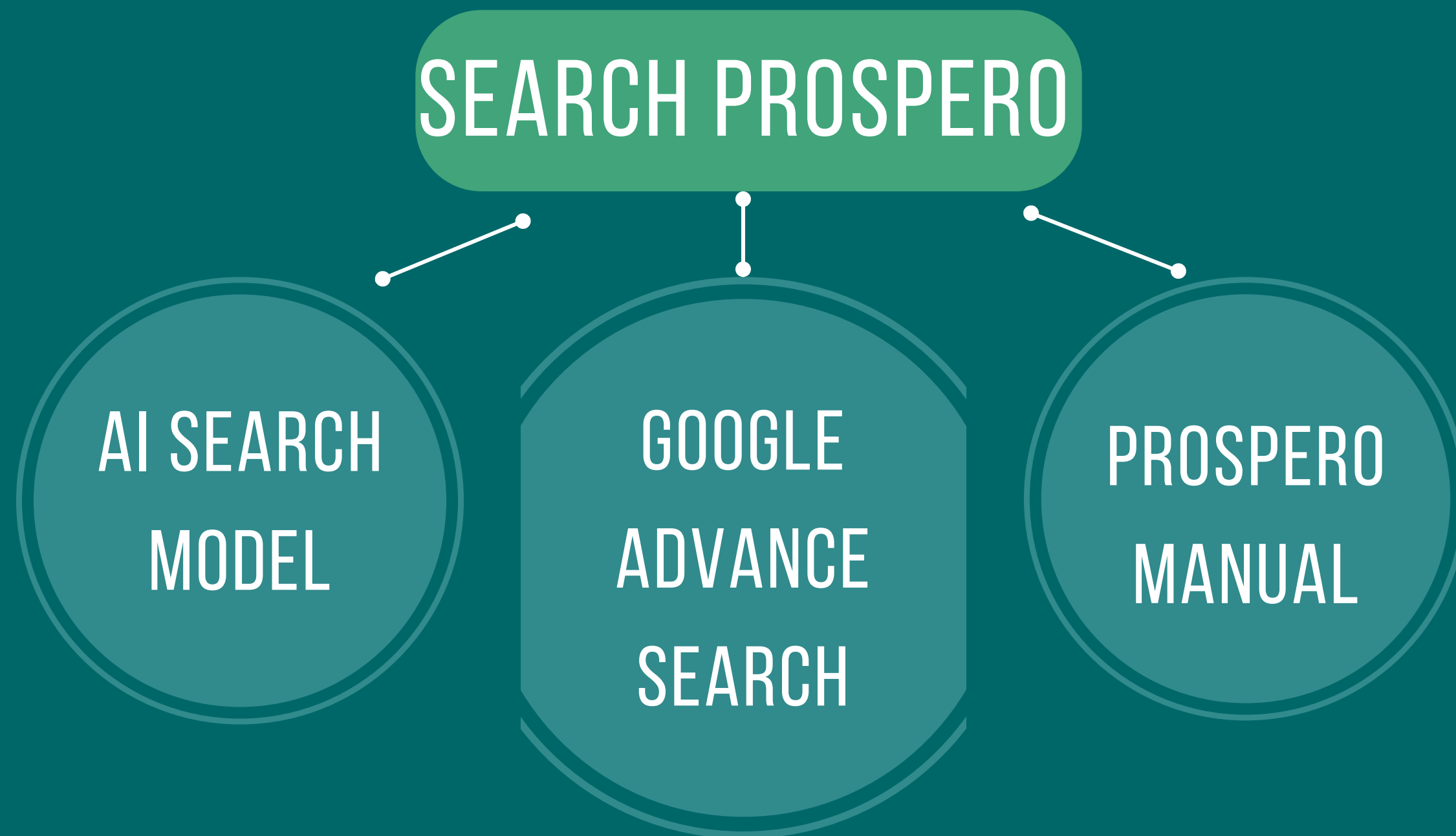


PROSPERO SEARCH STRATEGY

WHAT IS PROSPERO?

- **WHY PROSPERO?**
- **DO WE NEED TO REGISTER?**

TASK - 3



15
Mins

TASK - 3

1. ([HTTPS://WWW.CRD.YORK.AC.UK/PROSPERO/SEARCH/HELP](https://www.crd.york.ac.uk/prospero/search/help)) READ

2. [HTTPS://WWW.CRD.YORK.AC.UK/PROSPERO/SEARCH/MESH](https://www.crd.york.ac.uk/prospero/search/mesh) READ

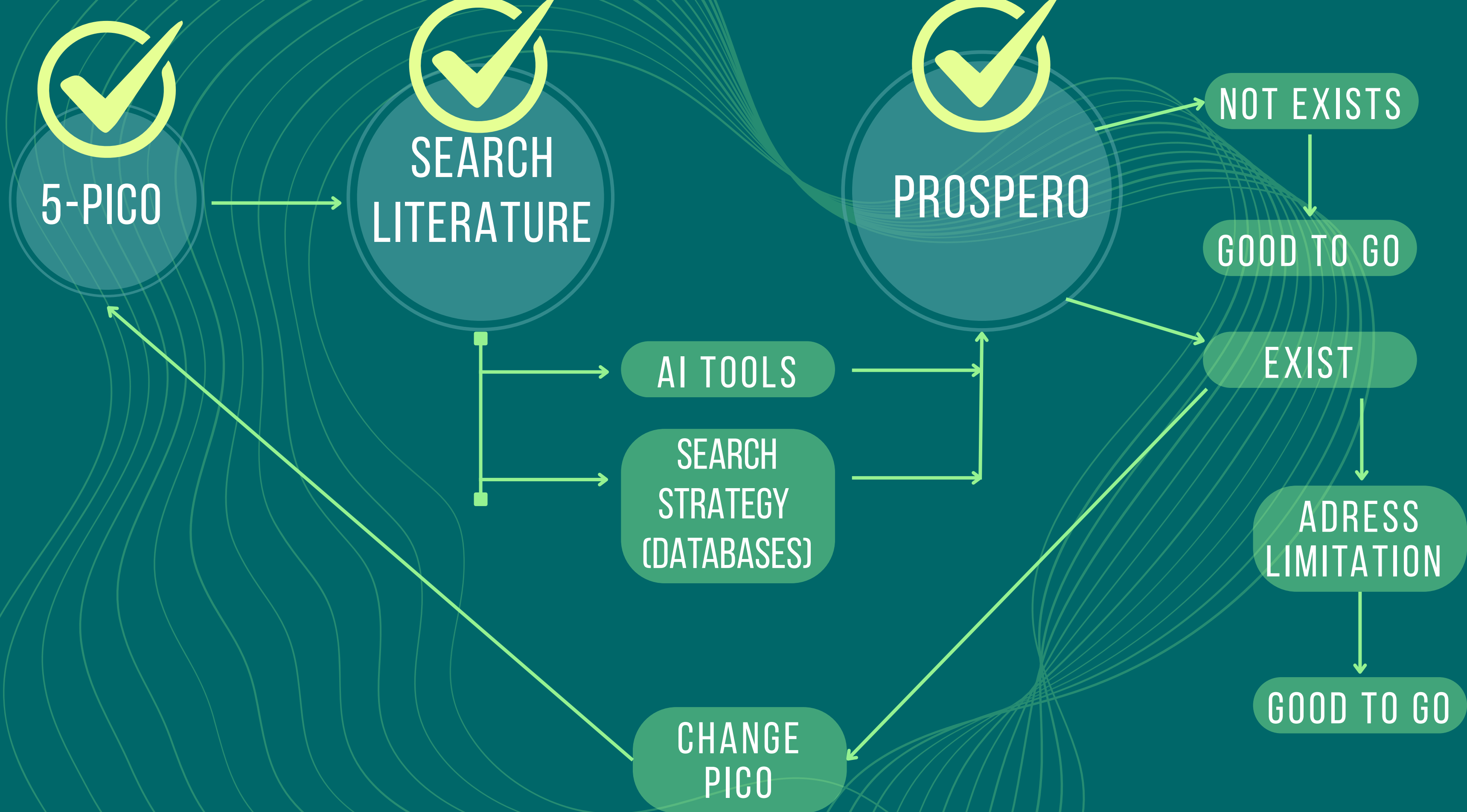
3. SEARCH PROSPERO FOR ANY EXISTING REGISTERED PROTOCOL SIMILAR TO YOUR PICO
([HTTPS://WWW.CRD.YORK.AC.UK/PROSPERO/HOME](https://www.crd.york.ac.uk/prospero/home))

4. AI PROMPT -

ASSUME YOURSELF AN EXPERT WEB SCRAPPER AND GIVE ME A SEARCH STRATEGY TO SEARCH
FOR ANY EXISTING PROTOCOL ON PROSPERO SIMILAR TO MY PICO _____

1)YOU FIND IF ANY 2)GIVE SEARCH STRATEGY FOR GOOGLE ADVANCE SEARCH 3)SEARCH
STRATEGY FOR PROSPER

15
Mins





ADDRESSING LIMITATIONS

1. IDENTIFY THE LIMITATIONS OF THE EXISTING PROTOCOL

- 1. POPULATION GAPS (E.G., ONLY PEDIATRIC PATIENTS, MISSING SUBGROUPS LIKE LENNOX-GASTAUT SYNDROME)**
- 2. INTERVENTION GAPS (E.G., ONLY EPIDIOLEX, NOT FULL-SPECTRUM CBD)**
- 3. OUTCOME GAPS (E.G., ONLY SEIZURE FREQUENCY, MISSING QUALITY OF LIFE OR COGNITIVE EFFECTS)**
- 4. METHODOLOGICAL WEAKNESSES (E.G., NO SUBGROUP ANALYSIS, OUTDATED LITERATURE SEARCH)**
- 5. STATUS ISSUES (E.G., PROTOCOL IS ABANDONED, NOT UPDATED IN 3+ YEARS)**

2. STRATEGIES TO DIFFERENTIATE YOUR REVIEW

A. MODIFY YOUR PICO FOR NOVELTY (EXAMPLE)

IN ADULTS WITH REFRACTORY EPILEPSY (P), DOES ADJUNCTIVE CANNABIDIOL (CBD) (I) COMPARED TO PLACEBO OR STANDARD ANTIEPILEPTICS (C) REDUCE SEIZURE FREQUENCY (O)? ASSUME YOU ARE AN EXPERT WEB DATA SCRAPER.

Element	Example Adjustment
Population	Focus on <i>older adults</i> (≥ 50 yrs) or <i>specific epilepsy subtypes</i> (Dravet syndrome)
Intervention	Compare <i>different CBD formulations</i> (isolated vs. full-spectrum)
Comparator	Add <i>active comparators</i> (e.g., fenfluramine, brivaracetam)
Outcomes	Include <i>patient-reported outcomes</i> (e.g., mood, sleep, quality of life)

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2. STRATEGIES TO DIFFERENTIATE YOUR REVIEW

B. EXPAND METHODOLOGICAL RIGOR

- INCLUDE REAL-WORLD EVIDENCE (REGISTRIES, OBSERVATIONAL STUDIES).
- UPDATE LITERATURE SEARCH (ENSURE COVERAGE OF THE LAST 1–2 YEARS).

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C. NARROW OR BROADEN SCOPE

- IF THE EXISTING REVIEW IS BROAD, FOCUS ON A SUBGROUP (E.G., TREATMENT-RESISTANT FOCAL SEIZURES).
- IF IT'S NARROW, EXPAND TO BROADER POPULATIONS (E.G., INCLUDE PEDIATRIC + ADULT DATA).

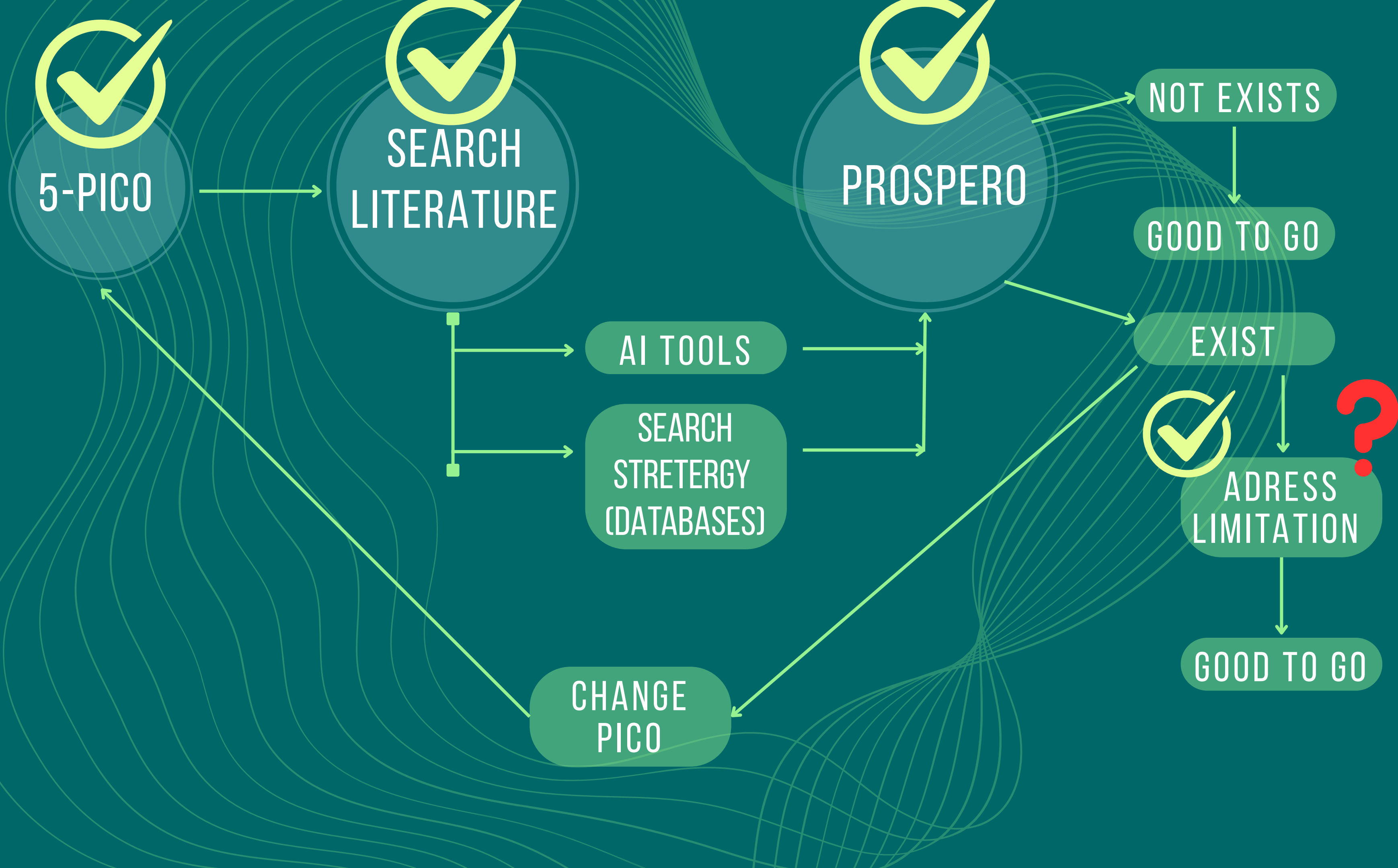
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D. ADDRESS PROTOCOL ABANDONMENT

- IF THE EXISTING PROTOCOL IS INACTIVE (E.G., LAST UPDATED >2 YEARS AGO), STATE:
- *"WHILE A SIMILAR PROTOCOL WAS REGISTERED (CRD420XXXXXX), IT HAS NOT BEEN UPDATED SINCE [YEAR]. OUR REVIEW WILL INCORPORATE RECENT RCTS AND REAL-WORLD DATA PUBLISHED AFTER ITS LAST SEARCH DATE."*

3. REAL-WORLD

- SCIENTIFIC ANALYSIS AND INNOVATION



REPORTING

THANK YOU

