

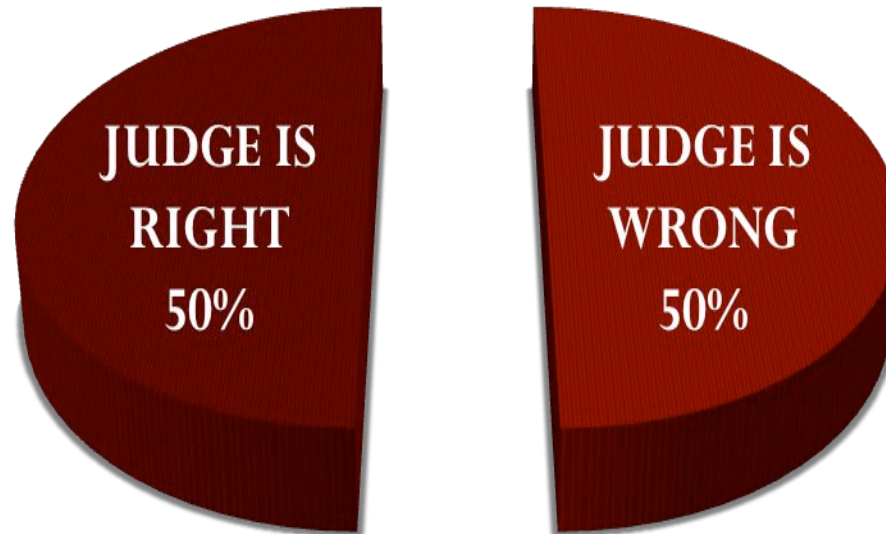
# An Evidentiary Analysis of Generative Artificial Intelligence And the Evolution of Digital Evidence



**Presentation & PPT  
by Heather L. King  
heather@koonfuller.com**



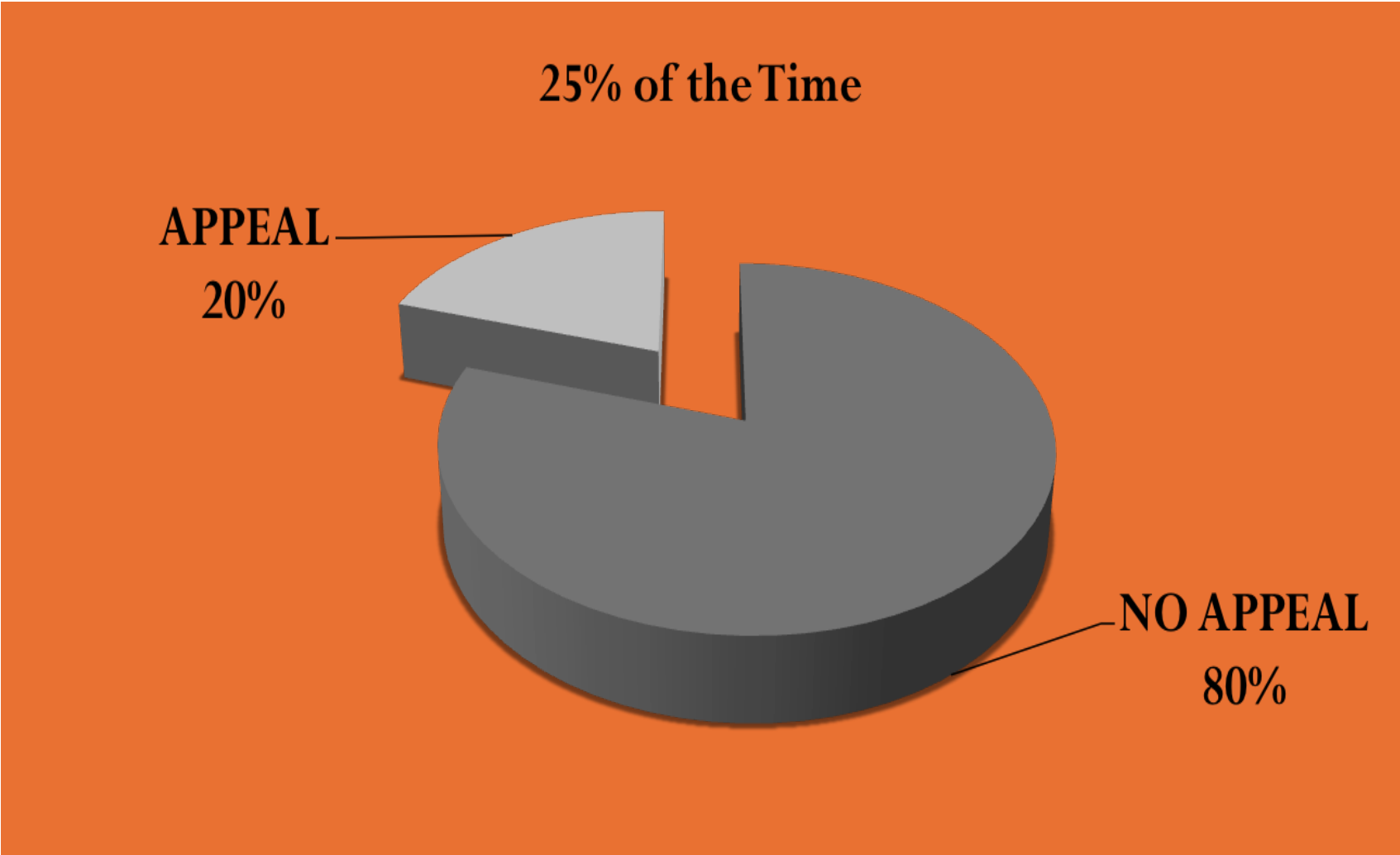
# Evidentiary Rulings [100% of the time]



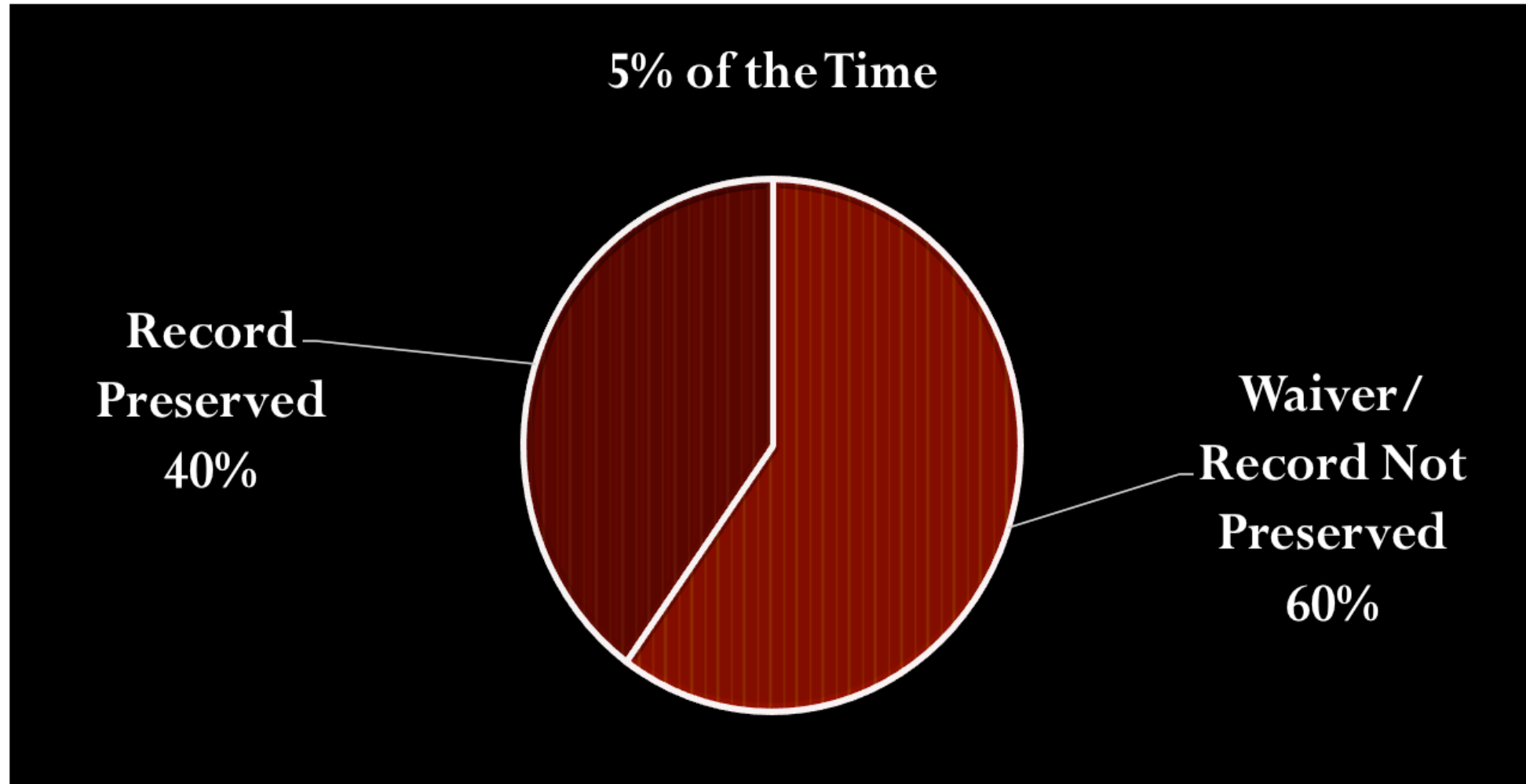
# Evidentiary Rulings [50% of the time]



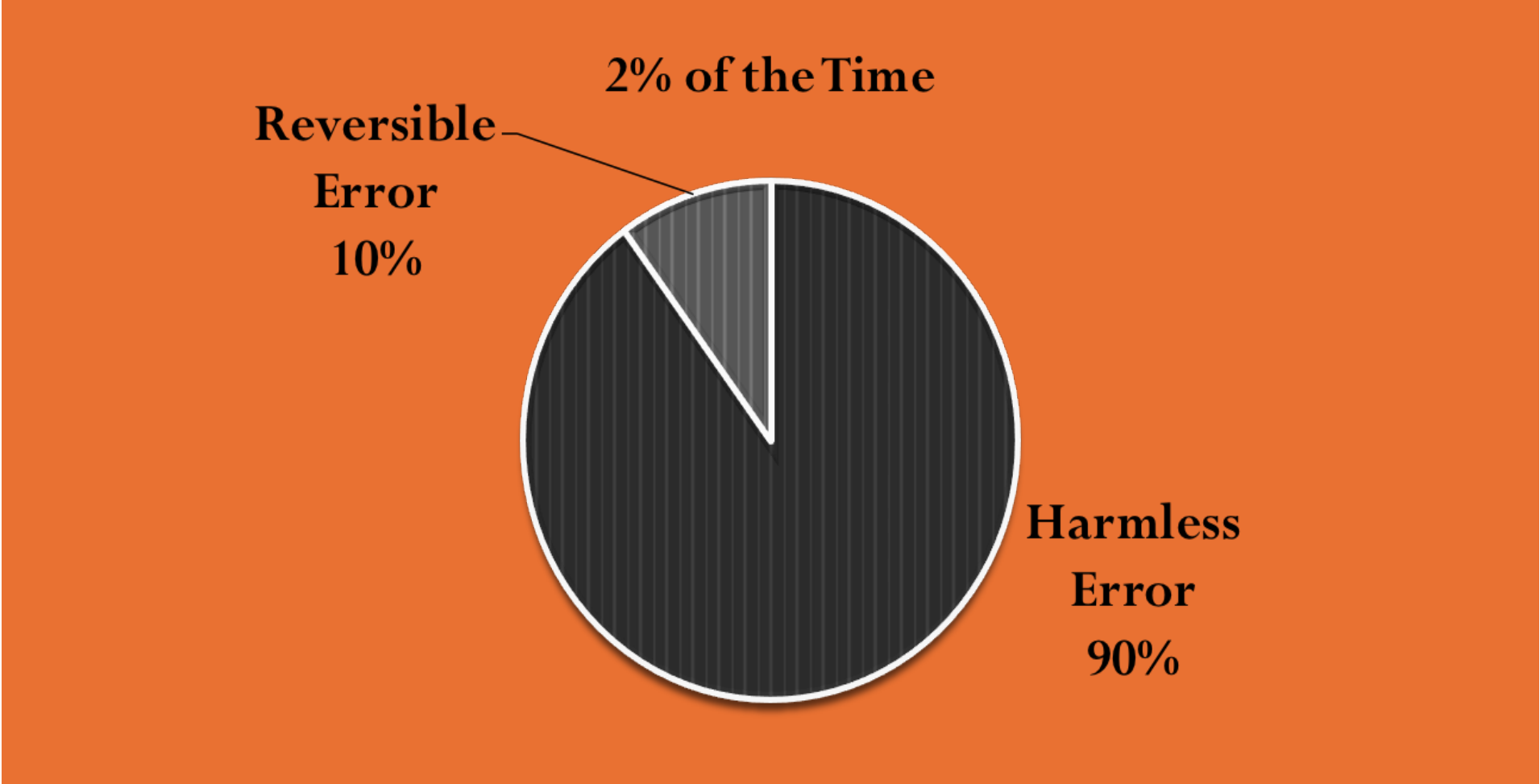
# Evidentiary Rulings [25% of the time]



# Evidentiary Rulings [5% of the time]

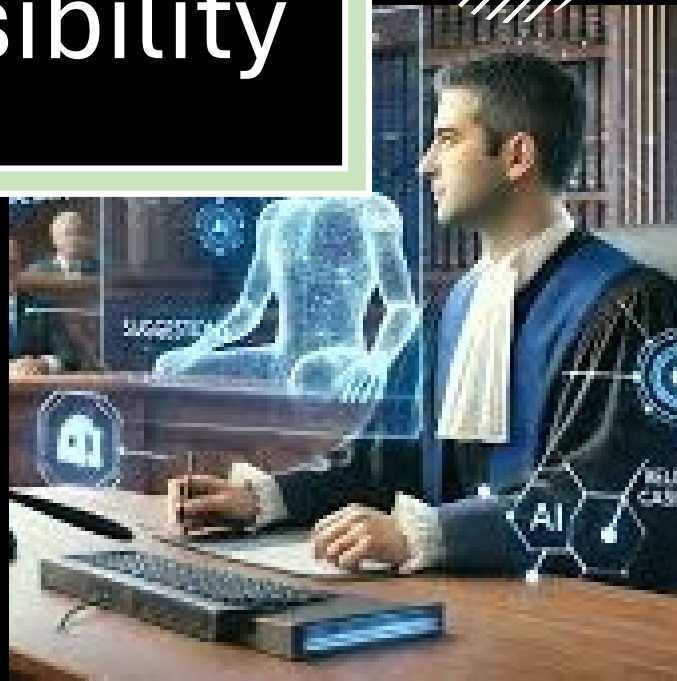


# Evidentiary Rulings [2% of the time]



0.2%

# Prerequisites to Admissibility



- **Relevant**
  - **TRE 401**
- **Probative Value vs. Unfair Prejudice**
  - **TRE 403**
- **Not Hearsay**
  - **TRE 801-805**
- **Authentic**
  - **TRE 901-902**
- **Original or Duplicate**
  - **TRE 1001**

# Precedential Case Law

- **Relevant**
  - **TRE 401**
- **Probative Value vs. Unfair Prejudice**
  - **TRE 403**
- **Not Hearsay**
  - **TRE 801-805**
- **Authentic**
  - **TRE 901-902**
- **Original or Duplicate**
  - **TRE 1001**

# Precedential Case Law

## [Criminal Cases]

- **Relevant**
  - **TRE 401**
- **Probative Value vs. Unfair Prejudice**
  - **TRE 403**
- **Not Hearsay**
  - **TRE 801-805**
- **Authentic**
  - **TRE 901-902**
- **Original or Duplicate**
  - **TRE 1001**

# Precedential Case Law

**[Criminal Cases]**

**Case Law  
from other Jurisdictions  
[Federal/State]**

- **Relevant**
  - **TRE 401**
- **Probative Value vs. Unfair Prejudice**
  - **TRE 403**
- **Not Hearsay**
  - **TRE 801-805**
- **Authentic**
  - **TRE 901-902**
- **Original or Duplicate**
  - **TRE 1001**

# Precedential Case Law

[Criminal Cases]

Case Law  
from other Jurisdictions  
[Federal/State]

[even other countries]

- **Relevant**
  - **TRE 401**
- **Probative Value vs. Unfair Prejudice**
  - **TRE 403**
- **Not Hearsay**
  - **TRE 801-805**
- **Authentic**
  - **TRE 901-902**
- **Original or Duplicate**
  - **TRE 1001**

# Research all Jurisdictions

Evidence rules  
are very similar,  
if not the same

Look for theories  
to argue



Letter  
Foundation  
- **It is what I  
say it is -**

---



# Letter Foundation

- **It is what I say it is** -

- Do you recognize this document?
- What is it?
  - Can you identify it for the Court?
- When did you write it?
- Who is the letter directed to?
- Is this the same letter?
  - Has it been modified in any way?
  - Is this a true and accurate representation of the letter?

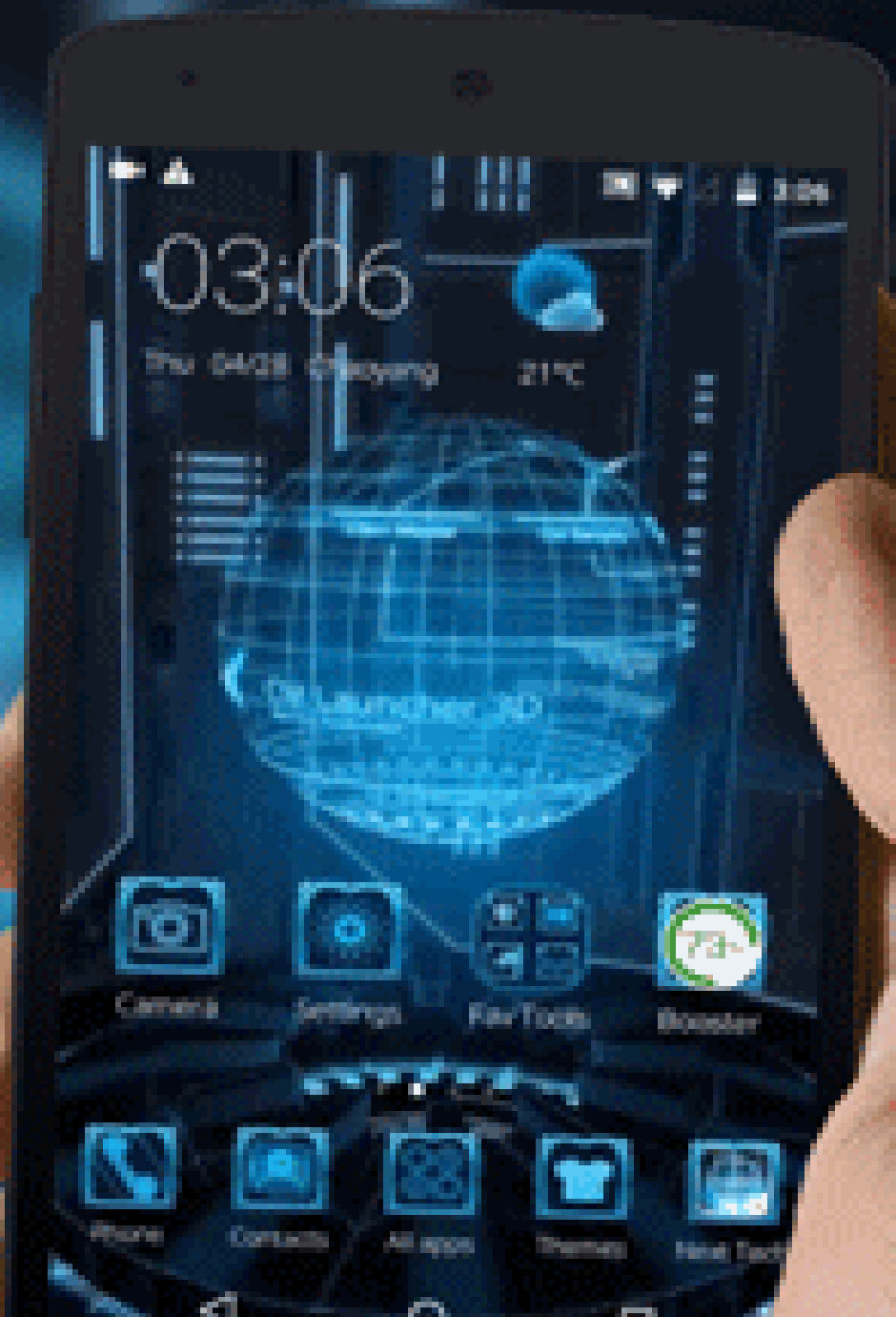
Photograph  
Foundation  
- **It is what I  
say it is -**



# Photograph Foundation

- **It is what I say it is** -

- Do you recognize this? What is it?
  - Can you identify it for the Court?
- How do you recognize it?
- Has it been deleted or changed in any way?
- Is the photograph a fair and accurate depiction of the events that took place that day?



- **Letters = Emails**



- **Letters = Emails**
- **Letters = Text Messages**



- **Letters = Emails**
- **Letters = Text Messages**
- **Letters = Messages**



- **Letters = Emails**
- **Letters = Text Messages**
- **Letters = Messages**
- **Photos =**



# Digitally Enhanced Photo

- **Whether modification of the photo is allowed by the social media location.**
- **Methods of modifying photograph**
  - **(through filtering)**
- **Methods of filtering**
  - **(filtering options available)**

**2016**

Honey I found  
a pic of your  
Grandmother



**2090**

Honey I found  
a pic of your  
Grandmother





## Digitally Enhanced Photo

- **Has this photograph been changed in any way?**
  - **Yes, it has an Instagram filter I added.**
- **Is this photo posted on social media anywhere?**
  - **Yes, Instagram.**



App image  
modification  
Photo  
predicate

- Has this image been modified, changed, or created?
- Was this created by uploading images into an app?
- The images you uploaded, are you familiar with the images and are they original images?



App image  
modification  
Photo  
predicate

- Did the app create these images based upon the photos you uploaded?
- Are these photos a fair and accurate representation of the images that were created by the app?

Fake Social  
Networking  
Fake  
Documents





## Social Dummy

- **App that creates and shares fake social posts and statuses.**
- **“A simple alternative for either fooling your friends or to have access to your own fake social media accounts.”**

# Prank Me Not

## Facebook Status Generator

Prank your friends or imitate celebrities. You can make fake facebook status updates in any creative way you like. Upload profile picture, write status, select likes, add comments and many more cool features. Start using our **Facebook Status generator** now.

Create Facebook Status

## Facebook Chat Generator

Create **fake facebook chat** and prank your friends. You can even imitate celebrities to chat with you to fool your friends. Upload profile picture for you and the other person, write as many chat messages as you like. Start using our Facebook Chat generator for Free!

Create Facebook Chat

## Tweet Generator

Create Hilarious tweets and Fool your friends. You can make **fake tweets** in any creative way you like. Upload profile picture, select username, write message, change date and many more cool settings. Start using our **Tweet Generator** for Free!

Create Tweet

## Twitter Message Generator

Create fake twitter messages and prank your friends. You can even imitate celebrities to chat with you to fool your friends. Upload profile picture for you and the other person, write as many chat messages as you like. Build your own fake twitter messages now.

Create Twitter Message

# SpoofCard



## Protect Your Privacy

Call and text from a secondary number to protect your personal information and privacy. It's easy to use and works on any phone. Try it for FREE when you sign up on our mobile apps!



*Trusted by over 5 Million people who value their privacy.*

Settings

Conversation

Sender  Sender  Receiver

Add message to conversation

Name

Blur name

Operator

Clock

"Messages"

"Edit"

Connection

3G  Wi-Fi  EDGE  None

Battery status

97%  44%  13%  Hide

Spouse

Enter His Email Address.  
See Social Profiles,  
Pictures & Videos Now!

Update! Fake iOS7 Text Message now available

High quality & NO watermark on final image!



Contact Name:

Carrier:  Time:

Line 1:

Line 2:

Line 3:

Line 4:

NEW YORK STATE

*Ronald Parks*

ID: 502-23-6894  
DOB: 05-21-78

PARKS, MICHAEL  
4548A GREENWOOD HILLS  
GREENWOOD HILLS  
41503

**REAL ID**

M EYES: BRN HT: 6-02 CLASSIC  
REG: NONE  
ISSUED: 07-26-95 EXPIRES: 07-26-03

*Ronald Parks*

502-23-6894

# Replace Your Docs

Replacement documents for **proof of income**  
and **proof of address** for novelty use

- **Replaceyourdoc.com**
- **Edit any existing document with details you provide.**
- **Add your own transactions, names, dates and addresses to bank statements, utility bills and paystubs.**
- **Option to print it from home the very same same.**
- **Unlimited changes and modifications until you are satisfied.**
- **“Novelty” proof of income documents.**

Contact us  
 8power.com  
 0800 073 3000

From mobile  
 0191 100 3000

1 > Your energy details

Your tariff  
 You're on a standard tariff

Electricity  
 You're on a standard tariff

Ends  
 31st March 2014

You need  
 This cost you  
 4,197.16p  
 or 23.94p per kWh

Avoid estimated bills  
 1. Call us or go to [8power.com](http://8power.com) to set up date meter reading or a smart meter.  
 2. Get our free email or text meter read service.

Your previous statement  
 No arrears £134.00  
 Total charges after your payments £134.00 credit

This statement  
 Total charges this statement £143.19

Could you pay less?  
 Over the next 12 months you could save £26.23 by switching from your current tariff to our cheapest variable tariff.

Highly rated  
 Manage your account online

Award-winning TV from BT

What do I owe?  
 £243.78

2432.84 kWh

When do I pay?  
 19th December

How can I get in touch?

# Talk Talk

0800 073 3000

mytalktalk.co.uk

Your monthly bill

Amount payable including VAT £37.45

Direct debit date 21/12/13

Do you have a question about your bill?

# EDF

Account number  
 0800 096 9000

26 March 2014 - 07 June 2014 (92 days)

Your electricity and gas bill

Over the next 12 months you could save £26.23 by switching from your current tariff to our cheapest variable tariff.

Your new account balance  
 £1,451.80

# E-ON

Electricity and gas statement - estimated

Electricity payment: £221.22

Gas payment: £228.08

Total amount due: £449.30

# United Utilities

Your water bill  
 1 April 2013 to 31 March 2014

Amount now due  
 £469.47

Set up a Direct Debit



# RBS

Date	Description	Amount
01/01/2014	Balance b/fwd	100.00
02/01/2014	Transfer to Savings	(50.00)
03/01/2014	Interest on Current	1.20
04/01/2014	Standing Order	(20.00)
05/01/2014	Direct Debit	(10.00)
06/01/2014	Interest on Current	1.10
07/01/2014	Transfer from Savings	30.00
08/01/2014	Interest on Current	1.00
09/01/2014	Standing Order	(20.00)
10/01/2014	Direct Debit	(10.00)
11/01/2014	Interest on Current	0.90
12/01/2014	Balance c/fwd	100.00



# Lloyds

Account Summary

Date	Payment Type	Details	Paid in (£)	Paid out (£)	Balance (£)
27 Feb 14	Standing Order	BALANCE CARRIED FORWARD			100.00
28 Feb 14	Transfer	100 - 10000000	100.00		100.00
27 Feb 14	Standing Order	10000000 10000000		100.00	100.00
28 Feb 14	Standing Order	BALANCE CARRIED FORWARD			100.00



# Lloyds Business

Account Summary

Date	Payment Type	Details	Paid in (£)	Paid out (£)	Balance (£)
27 Feb 14	Standing Order	BALANCE CARRIED FORWARD			100.00
28 Feb 14	Transfer	100 - 10000000	100.00		100.00
27 Feb 14	Standing Order	10000000 10000000		100.00	100.00
28 Feb 14	Standing Order	BALANCE CARRIED FORWARD			100.00



# CO-OP

Date	Description	Amount
01/01/2014	Balance b/fwd	100.00
02/01/2014	Transfer to Savings	(50.00)
03/01/2014	Interest on Current	1.20
04/01/2014	Standing Order	(20.00)
05/01/2014	Direct Debit	(10.00)
06/01/2014	Interest on Current	1.10
07/01/2014	Transfer from Savings	30.00
08/01/2014	Interest on Current	1.00
09/01/2014	Standing Order	(20.00)
10/01/2014	Direct Debit	(10.00)
11/01/2014	Interest on Current	0.90
12/01/2014	Balance c/fwd	100.00



# Natwest



# Nationwide Version 1



# Nationwide Version 2



# TSB

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**CHOICE**  
 JRMartin Choice Bank  
 West Virginia  
 P O Box 990180  
 Country Roads, WV 26026-0180

00013482 DCA 001 LA 10206 - FYN T1 00000000 07 0000

Company Name  
 Company Address  
 State, Zip

July 1, 2018 through July 31, 2018  
 Primary Account: 00000958581485

**CUSTOMER SERVICE INFORMATION**  
 WebSite: [www.choicebank.com](http://www.choicebank.com)  
 Service Center: 1-800-555-9935  
 Hearing Impaired: 1-800-555-7363  
 Para Espanol: 1-877-555-4273  
 International Calls: 1-713-555-1679

Contact us by phone for questions, on this statement, change information, and general inquiries. 24 hours a day, 7 days a week

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**Account Summary**

Opening Balance	\$5,234.09	
Withdrawals	\$2,395.67	
Deposits	\$2,872.45	
<b>Closing Balance on Apr 18, 2010</b>		<b>\$9,710.87</b>

---

**Your Transaction Details**

Date	Details	Withdrawals	Deposits	Balance
Apr 8	Opening Balance			5,234.09
Apr 8	Insurance		272.45	5,506.54
Apr 10	ATM	200.00		5,306.54
Apr 12	Internet Transfer		250.00	5,556.54
Apr 12	Payroll		2100.00	7,656.54
Apr 13	Bill payment	135.07		7,521.47
Apr 14	Direct debit	200.00		7,321.47
Apr 14	Deposit		250.00	7,567.87
Apr 15	Bill payment	525.72		7,042.15
Apr 17	Bill payment	327.63		6,714.52
Apr 17	Bill payment	729.96		5,984.56
Apr 18	Insurance		272.45	5,506.54
Apr 18	ATM	200.00		5,306.54
Apr 18	Internet Transfer		250.00	5,556.54
Apr 18	Payroll		2100.00	7,656.54
Apr 18	Bill payment	135.07		7,521.47
Apr 19	Direct debit	200.00		7,321.47
Apr 19	Deposit		250.00	7,567.87
Apr 19	Bill payment	525.72		7,042.15
Apr 20	Bill payment	327.63		6,714.52
Apr 20	Bill payment	729.96		5,984.56
Apr 20	Deposit		250.00	7,567.87
Apr 20	Bill payment	525.72		7,042.15
Apr 20	Bill payment	327.63		6,714.52
Apr 21	Bill payment	729.96		5,984.56
<b>Closing Balance</b>				<b>\$9,710.87</b>



# Create and Edit Documents

Select a Document to Get Started



## Create Documents

Select a template from our library of 500+ documents. Then fill out a step-by-step questionnaire and export your completed document in PDF or Word format.



## Edit PDFs

Upload and edit PDFs with our dynamic PDF editor. You can add text, images, checkmarks, and save and update your PDF at any time.

## Fake USA Utility Bills

**Step 1/2. Please select your Utility Bills choice below:**

Please see our [samples page](#) for a larger image.

*Providing incorrect or inaccurate information for the purpose of misleading others is committing fraud. You must be the original owner of the original documents to place an order. We are not affiliated or connected with any of the companies below. You should contact your original provider for the official documents.*

USA - Florida Utility Bill



USA - Texas Utility Bill



USA - California Utility Bill



USA - Virginia Utility Bill



USA - Georgia Utility Bill



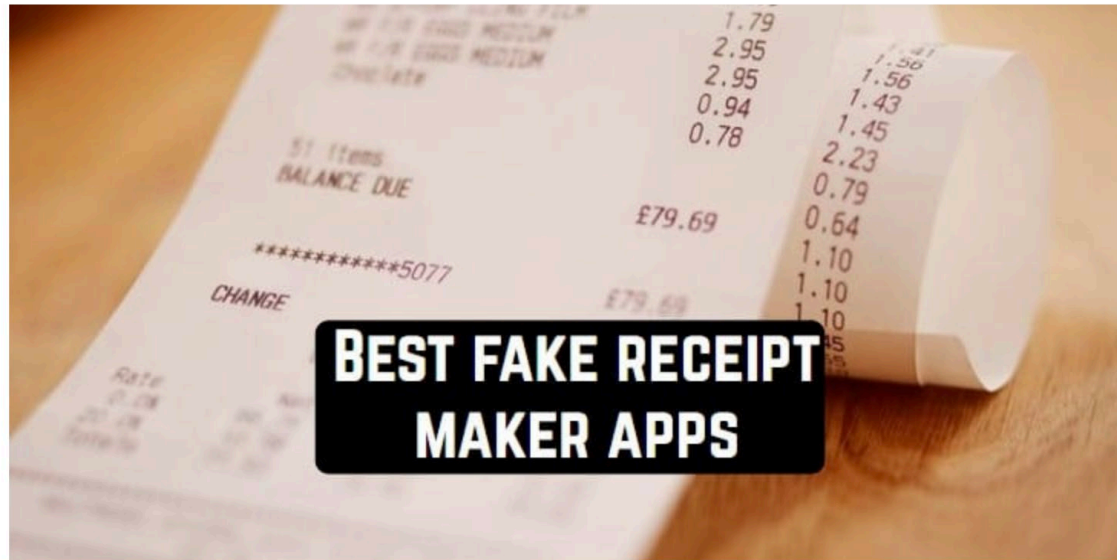
USA - Comcast Utility Bill



USA - Frontier Communications Bill

USA - Spectrum Bill

USA - Time Warner Cable Bill



## Google “Best Fake Receipt Makers”

- **Invoice home**
- **Invoice maker**
- **Billdu**
- **Invoice 2go**
- **Quick receipt**
- **Tiny invoice**
- **Easy Receipts Generator**

# ACCURATE AND DEPENDABLE DOCUMENTS RIGHT TO YOUR EMAIL QUICKLY AND EASILY!

**MAKE YOUR  
PAYSTUB  
NOW!**

EXAMPLE

**MAKE YOUR  
UTILITY  
BILL NOW!**

EXAMPLE

**MAKE YOUR  
W-2 NOW!**

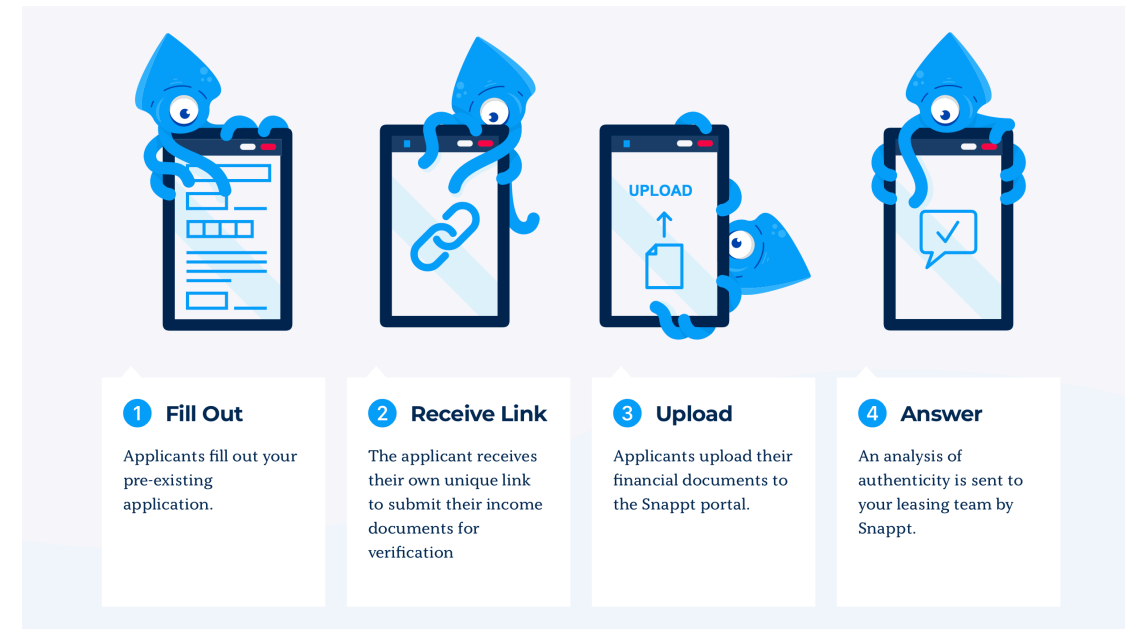
EXAMPLE

**MAKE YOUR  
1099 NOW!**

EXAMPLE



- Predictive Software
- Powered by Artificial Intelligence
- Trained by over 3MM docs and scanning 200K daily
- Scans for over 10,000 anomalies to determine document manipulation
- 99.8% accuracy





# Electronic Communications



# TRE 901(b)(4)

## Distinctive Characteristics

- From the list of examples of methods of authentication:
- **Distinctive characteristics** and the like.
- Appearance, contents, substance, internal patterns, or other distinctive characteristics, taken in conjunction with the circumstances.

# TRE 901(b)(4)

## Distinctive Characteristics

- From the list of examples of methods of authentication:
- Distinctive characteristics and the like.
- **Appearance**, contents, substance, internal patterns, or other distinctive characteristics, taken in conjunction with the circumstances.

# TRE 901(b)(4)

## Distinctive Characteristics

- From the list of examples of methods of authentication:
- Distinctive characteristics and the like.
- **Appearance, contents**, substance, internal patterns, or other distinctive characteristics, taken in conjunction with the circumstances.

# TRE 901(b)(4)

## Distinctive Characteristics

- From the list of examples of methods of authentication:
- Distinctive characteristics and the like.
- **Appearance, contents, substance**, internal patterns, or other distinctive characteristics, taken in conjunction with the circumstances.

# TRE 901(b)(4)

## Distinctive Characteristics

- From the list of examples of methods of authentication:
- Distinctive characteristics and the like.
- **Appearance, contents, substance, internal patterns,** or other distinctive characteristics, taken in conjunction with the circumstances.

# TRE 901(b)(4)

## Distinctive Characteristics

- From the list of examples of methods of authentication:
- Distinctive characteristics and the like.
- Appearance, contents, substance, internal patterns, or other distinctive characteristics, taken in conjunction with the circumstances.

# TRE 901(b)(4)

## Distinctive Characteristics

- From the list of examples of methods of authentication:
- Distinctive characteristics and the like.
- Appearance, contents, substance, internal patterns, or other distinctive characteristics, taken in conjunction with the circumstances.

**TIENDA**, 358 S.W.3d 633, Tex. Crim. App. 2012  
Distinctive Characteristics **TRE 901(b)(4)**

- Photos of tattoos, unique sunglasses, earring.
- Reference to victim's death and funeral music.
- Reference to his gang.
- Instant messages referring to the shooting.
- Comments about snitching.
- Reference to ankle monitoring (with photo).
- Profile contained his email addresses and nickname.



It's true that the Defendant could have been the victim of a year long conspiracy, but that conspiracy *as an alternate scenario* is something the finder of fact or jury could have considered and weighed in making its decision.

# **THE ZONE OF REASONABLE DISAGREEMENT**

[Tienda, 358 S.W.3d 633, Tex. Crim. App. 2012]



If the trial court's ruling that a jury (factfinder) could reasonably find proffered evidence authentic is at least “**within the zone of reasonable disagreement,**” a reviewing court should not interfere.

# Emails/Texts/Messages

- May be authenticated by direct or circumstantial evidence
- May be authenticated entirely by circumstantial evidence, including its distinctive characteristics TRE 901(4)(B)
- May be authenticated by comparison of exemplars with other communications that already have been authenticated TRE 901(b)(3)
- May qualify as business/domestic record
- May be self-authenticating under TRE 902(11)



# Emails/Texts/Messages

- Consistency with the address/number/handle on another email/text/message sent by the defendant
- the author's awareness through the communication of the details of defendant's conduct
- the communication's inclusion of similar requests that the defendant had made by phone during the time period; and
- the communication's reference to the author by the defendant's nickname.



# Reply Letter Doctrine [original]

A letter received in the due course of mail purportedly in answer to another [authenticated] letter is prima facie genuine and admissible without further proof of authenticity.



A reply letter needs no further authentication because it is unlikely that anyone other than the purported writer would know and respond to the contents of the earlier letter addressed to him.



The reply letter doctrine is based on the idea that it's unlikely that anyone other than the intended recipient would know about or respond to the contents of the original letter.

# Reply Letter Doctrine - EMAILS

[Varkonyi v. State, 276 SW3d 27, El Paso 2008]

An **EMAIL (\*ATTACHMENT)** received in the due course of **EMAILING** purportedly in answer to another [authenticated] **EMAIL** is prima facie genuine and admissible without further proof of authenticity.



An **EMAIL (\*ATTACHMENT)** needs no further authentication because it is unlikely that anyone other than the purported writer would know and respond to the contents of the earlier **EMAIL** addressed to him.

# Reply Letter Doctrine – IM's

[People v. Pierre, 41 A.D. 3d 289 (New York App. Div 2007)]

An **INSTANT MESSAGE** received in the due course of **MESSAGING** purportedly in answer to another [authenticated] **INSTANT MESSAGE** is prima facie genuine and admissible without further proof of authenticity.



An **INSTANT MESSAGE** needs no further authentication because it is unlikely that anyone other than the purported writer would know and respond to the contents of the earlier **INSTANT MESSAGE** addressed to him.

# Reply Letter Doctrine – TEXTS

[Manuel v. State 357 S.W.3d 66 (Tex. App. Tyler 2011)]

A **TEXT** received in the due course of **TEXTING** purportedly in answer to another [authenticated] **TEXT** is prima facie genuine and admissible without further proof of authenticity.



A **TEXT** needs no further authentication because it is unlikely that anyone other than the purported writer would know and respond to the contents of the earlier **TEXT** addressed to him.

**Reply Letter Doctrine**  
**ALL ELECTRONIC COMMUNICATION**  
[*Butler v. State*, 459 S.W.3d 595  
(Tex. Crim. App. 2015)]

An **ELECTRONIC COMMUNICATION** received in the due course of **COMMUNICATING ELECTRONICALLY** purportedly in answer to another [authenticated] **ELECTRONIC COMMUNICATION** is prima facie genuine and admissible without further proof of authenticity.



An **ELECTRONIC COMMUNICATION** needs no further authentication because it is unlikely that anyone other than the purported writer would know and respond to the contents of the earlier **ELECTRONIC COMMUNICATON** addressed to him.

# Adoptive Admission Non-Hearsay

## **TRE 801(e)(2)**

- e) Exception for Admissions by a Party-Opponent. - A statement is admissible as an exception to the hearsay rule if it is offered against a party and it is
- (A) his own statement, in either his individual or a representative capacity, or
- (B) a statement of which he has manifested his adoption or belief in its truth, or
- (C) a statement by a person authorized by him to make a statement concerning the subject, or
- (D) a statement by his agent or servant concerning a matter within the scope of his agency or employment, made during the existence of the relationship or
- (E) a statement by a coconspirator of such party during the course and in furtherance of the conspiracy.

See what's new! 1

Your Move

- Adam Y. 'PLAY' - 5 days ago
- Whitney T. 'DUNK' - 2 days ago
- Spencer H. 'FLYER' - 7 hours ago

Facebook See who's playing! | Twitter Invite followers!

Their Move

- Greg H. 'TOQUE' - 4 hours ago
- Gabriela U. 'PUPPY' - 1 day ago
- Lindsey H.

The game board is a 10x10 grid. The word 'PLAY' is placed horizontally in the bottom row. The word 'FRIENDS' is placed horizontally in the middle row. A yellow letter 'R' is being placed vertically in the middle column, overlapping the 'I' in 'FRIENDS'. Other words visible include 'AWESOME' and 'MENDS'. The board is surrounded by letter tiles with various point values (1, 2, 3, 4, 8, 10) and special tiles (TW, TL, DL, DW).

- PLAY... 20 points - \_\_\_-
- Ha, yep, I thought you'd like that.
- I'm plotting a major comeback. I hope you're ready!
- That's #realtalk



See what's new! 1

Your Move

- Adam Y. 'PLAY' - 5 days ago
- Whitney T. 'DUNK' - 2 days ago
- Spencer H. 'FLYER' - 7 hours ago

Facebook See who's playing! | Twitter Invite followers!

Their Move







- Greg H. 'TOQUE' - 4 hours ago
- Gabriela U. 'PUPPY' - 1 day ago
- Lindsey H.




Words Friends game board showing the word 'PLAY' and 'FRIENDS' on a grid with various letter tiles (TW, DL, DW, TL, etc.).

- PLAY... 20 points - \_\_\_-
- Ha, yep, I thought you'd like that.
- I'm plotting a major comeback. I hope you're ready!
- That's #realtalk



# Electronic Communication Without Words

			
			
<b>BLUE ZONE</b>	<b>GREEN ZONE</b>	<b>YELLOW ZONE</b>	<b>RED ZONE</b>
Sad	Happy	Frustrated	Mad
Sick	Calm	Worried	Terrified
Tired	Feeling Good	Silly	Yelling
Bored	Focused	Excited	Hitting
Running Slow	Ready to Learn	Losing control	Out of Control

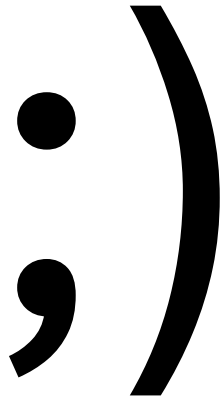
	Running late
	Good luck
	Be quiet
	You go girl
	See you soon
	Party time
	Call me
	Not my cup of tea

# Winkie Face Emoji is not consent (TX)

- A Texas man prosecuted for violently sexually assaulting an acquaintance in 2011.
- The defendant argued that his victim had preemptively consented to sex through several text messages they had exchanged prior to the incident, which he had interpreted as sexually suggestive.
- This text exchange had culminated in the victim texting the man “a ‘winkie face’ emoji.
- At trial, the defendant argued that there were at least two consents for sex—three, if one counts the ‘winkie face.’
- 10 years in prison



# Winking Emoticon showed amuse by opportunity to harass (DE)



- A Delaware judge interpreted a winking emoticon as a menacing signal.
- When a man secretly bought a plane ticket next to a colleague who clearly did not wish to see him again, “surprised” her on her flight to Paris, then boasted to friends in a text—“Was next to [the woman] on the plane to Paris and she switched seats;)” —
- The man claimed that the wink showed he had just been joking around.
- The judge disagreed, interpreting the wink as a sign that the man “was amused by yet another opportunity to harass” his target.

# *Ghanam v. Does*

303 Mich. App. 522, 845 N.W.2d 128 (2014)  
Sticking Tongue Out Emoticon Meant Sarcasm

- Defamation case involving missing road salt and new garbage trucks for the city
- Someone responded to an online forum thread that a public official was responsible for stealing the road salt and purchasing new garbage trucks to make more money from a side business selling tires
- Michigan Court of Appeals interpreted the “:P” (sticking tongue out emoticon) included in the posts to mean sarcasm, so the statements connected with that emoticon “cannot be taken seriously as asserting a fact,” so they were not defamatory

• P



A court in France sentenced a 22-year-old man to three months in prison for texting his ex-girlfriend a **pistol emoji**, which the court determined was a **“real threat”**



Prosecutors in a Massachusetts murder case successfully argued that the defendant's use of an emoji with X's for eyes coupled with the nickname of the victim suggested a premeditated homicide and *not* accidental death as the defendant argued.

**Emoji analysis combined with distinctive characteristics**



CA prosecutors were trying to prove that a man arrested during a prostitution sting was guilty of pimping charges, and among the evidence was a series of Instagram DMs he'd allegedly sent to a woman. One read: "Teamwork make the dream work" with high heels and money bag emoji placed at the end. Prosecutors said the message implied a working relationship between the two of them. The defendant said it could mean he was trying to strike up a romantic relationship.



---

Sex trafficking Expert:  
high heels and bags of  
money supported the  
interpretation that the  
defendant was  
accused of sex  
trafficking, essentially  
translating to “wear  
your high heels to  
come make some  
money.”



Crown emoji signifies “pimp is king”



Commonwealth v. Foster, 2019  
WL 3926375 (Pa. 2019).

---

**Following his Pennsylvania drug conviction, Foster raised the attention of his probation officer by posting photographs depicting guns, drugs, large amounts of money, along with pill emojis.**





People v. Smith, 2019  
WL 1122768  
(Cal. 2019).

**Smith was convicted of witness intimidation in California for sending a text to a witness that included emojis of guns, rats and eyeballs.**

Matter of B.C., 2019 WL  
4303033 (Ohio 2019).



An Ohio high school student was adjudicated as delinquent of inducing panic after posting a photo to Snapchat depicting a revolver laying on its side next to an open box of ammunition with the caption, “homecoming warm up” with two laughing emojis.

In Interest of W. B., 801  
S.E.2d 595 (Ga. 2017)

Three Georgia teens were adjudged as delinquents for committing a burglary. Prosecutors introduced into evidence printouts from the Facebook pages which displayed emojis that included guns, bombs, and dollar signs.





State v. Urich, 2019 WL  
3544019 (2019).

In Ohio, Urich was convicted of violating a protective order for, among other things, sending an emoji of a waiving hand to the victim.

# TRE 901(b)(4)

## Distinctive Characteristics

- From the list of examples of methods of authentication:
- Distinctive characteristics and the like.
- Appearance, contents, substance, internal patterns, or other distinctive characteristics, *taken in conjunction with the circumstances.*

# Intent



S. v. Grand Island Public Schools, 899 N.W.2d 893 (Neb. 2017)



Nebraska school officials had to deal with the threat of a student “fire” emoji that seemed to suggest a violent attack would occur at the school the next day.

How a platform displays an emoji may affect how someone defines the emoji





**Apple**



**Google**



**Microsoft**



**Samsung**



**LG**



**HTC**



**WhatsApp**



**Facebook**



**Messenger**



**Twitter**



**EmojiOne**



**Mozilla**



**Apple**



**Google**



**Microsoft**



**Samsung**



**LG**



**HTC**



**WhatsApp**



**Facebook**



**Messenger**



























**Twitter**



























**EmojiOne**



**Mozilla**

	Apple	Google	Microsoft	Samsung
2013*				
2014				
2015				
2016				
2017				
2018				

\* 2012 for Google and Microsoft

	Apple	Google	Microsoft	Samsung
2013*				
2014				
2015				
2016				
2017				
2018				

\* 2012 for Google and Microsoft



Communicating with Petitioner in person, by telephone, cell phone, electronic communication (including but not limited to email, text instant message, and video) or in writing in vulgar, profane, obscene, or indecent language or in a coarse or offensive manner with the intent to annoy or alarm the other party.

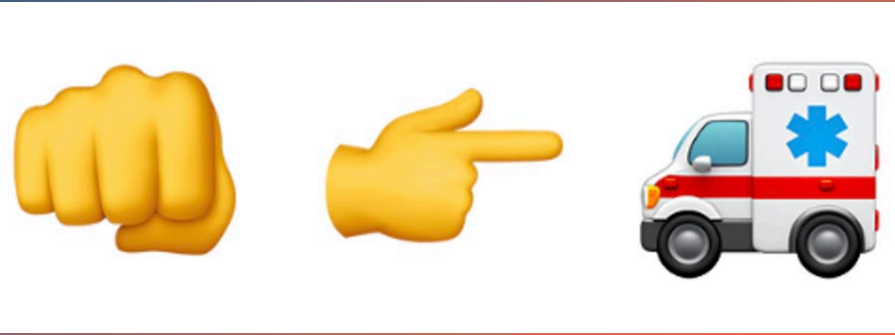


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How an emoji is displayed by a platform can change the entire meaning of the message.

**An ambulance is coming!**



This message sent by two men taken into custody for stalking charges in South Carolina.

**You're going to need an ambulance!**

**YOU'RE GOING TO NEED AN  
AMBULANCE!**



**AMBULANCE IS COMING!**



# Cross-Platform Discrepancy

Platforms like Apple, Google, and Microsoft are permitted to display different emojis idiosyncratically. Furthermore, Unicode cannot force the platforms to display emojis in the same way. So, the sender and the recipient may see different messages without realizing the discrepancy.



## Israel: Real Estate Contract Case

- Good morning
- Interested in house
- Just need to discuss the details.  
When is a good time for you?

# Israel: Real Estate Contract Case



**Based on this message, the landlord took the apartment off the market.**



**The potential tenants stopped responding to the landlord's message**



**The Israeli court did not hold that a binding contract had been created by the text message.**



**But Israel has a statutory requirement that contracting parties act in good faith, and the court awarded the landlord \$2,200 on the basis that the potential tenants were acting in bad faith.**



**Specifically, the judge said that “the sent symbols ... convey great optimism” and that the message naturally led the landlord to rely on the defendant's desire to rent his apartment.**

Words  
interpreted as  
an Emoji  
London  
Defamation  
Case

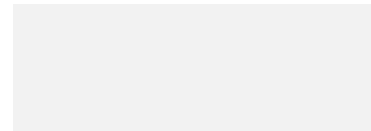
**Sex abuse case**

**BBC reported that a “leading conservative politician” was involved, but didn’t use the name.**

**But everyone posted (on FB and Twitter) that it was Lord McAlpine, causing his name to trend.**

**A popular politician (Sally Bercow) tweeted:**

**“Why is Lord McAlpine trending? \*innocent face\*”**



The words “\*innocent face\*” were not a true pictographic emoji. But the court nonetheless found that users of Twitter were likely to interpret the words “like a stage direction, or an emoticon”—in other words, like an emoji

\*innocent face\*



Ultimately, the court ruled that “\*innocent face\*” was “insincere and ironical” and contributed to the libel. The court ruled against Bercow, leading to her admission of fault and costing her more than \$20,000.



# Emojis – Sales Contract



- 2023 Canadian opinion
- Two parties were negotiating a contract to buy/sell flax grain in 2021
- One party texted a photo of a contract to the other party with the message “Please confirm flax contract”
- The second party responded with a “thumbs up” emoji
- The second party did not deliver per the contract
- First party sued
- Second party argued that the “thumbs up” was that he had received the contract and would review it

# Emojis – Sales Contract



- First party said only difference was that second party did not respond with “ok,” “yup,” or “looks good”
- The judge ruled the “thumbs up” was an agreement to the contract’s terms based on previous dealings over years of transactions
- “[T]his court cannot (nor should it) attempt to stem the tide of technology and common usage...”
- “The question is not what the parties subjectively had in mind, but rather whether their conduct was such that a reasonable person would conclude that they had intended to be bound”

## Emojis and Emoticons in Court Opinions

by Professor Eric Goldman (egoldman@gmail.com)

Last updated January 8, 2022



<https://digitalcommons.law.scu.edu/cgi/viewcontent.cgi?article=3610&context=historical>

# Levels [Artificial Intelligence]



# Levels [Artificial Intelligence]

- **Narrow (Weak) AI or artificial narrow intelligence (ANI)**

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- **Narrow (Weak) AI or artificial narrow intelligence (ANI)**
- **General AI or artificial general intelligence (AGI)**

# Levels [Artificial Intelligence]



- **Narrow (Weak) AI or artificial narrow intelligence (ANI)**
- **General AI or artificial general intelligence (AGI)**
- **Super AI or artificial superintelligence (ASI)**

# Levels [Artificial Intelligence]



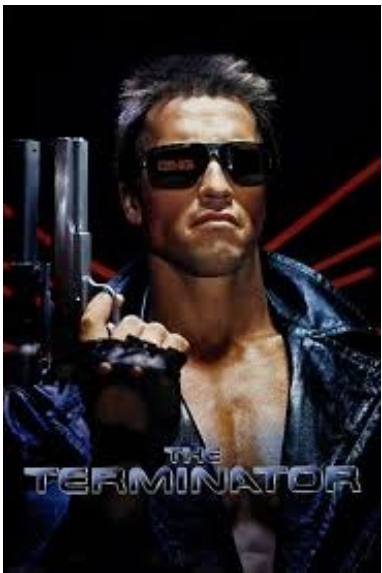
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- **General AI or artificial general intelligence (AGI)**
- **Super AI or artificial superintelligence (ASI)**
- **Reactive machines**

# Levels [Artificial Intelligence]



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- **Limited memory**
- **Theory of mind**
- **Self-aware**



# TERMINATOR 7

END OF WAR



## Narrow AI – “Weak AI”

---

- The only type of AI that exists today. It can be trained to perform a single or narrow task, often far faster and better than a human mind can.
- All other forms of AI are still theoretical.

# Traditional AI [vs. Generative AI]

## Traditional AI

- Focuses on performing a specific task intelligently
- Designed to respond to a particular set of inputs [Data].
- Capable of learning from data and making decisions or predictions **based on that particular set of inputs [Data]**.
- Primarily used to analyze data and make predictions

## Example

- Computer chess
- The computer knows all the rules
- it can predict your moves and make its own based on a **pre-defined strategy**.
- It's not inventing new ways to play chess but **selecting from strategies it was programmed with**.
- Siri/Alexa
- Google Search Engine

# [Traditional AI vs.] **Generative AI**

## **Generative AI**

- Can **create something new**
- Can be trained on a set of data and learn the underlying patterns to **generate new data** that mirrors the training set.
- can **create** text outputs, images, music and even computer code.

## **Example**

- You want to **create**/write a story
- You tell the Generative AI to create a story using the opening line “ Once upon a time, in a galaxy far away...’
- The Generative AI takes that line and **generates** a whole space adventure story, complete with characters, plot twists, and exciting conclusion.
- The Generative AI **creates something new** from the piece of information you gave it.

# Traditional AI vs. Generative AI

## Traditional AI

- Excels at pattern recognition
- It can analyze **data** and tell you what it sees

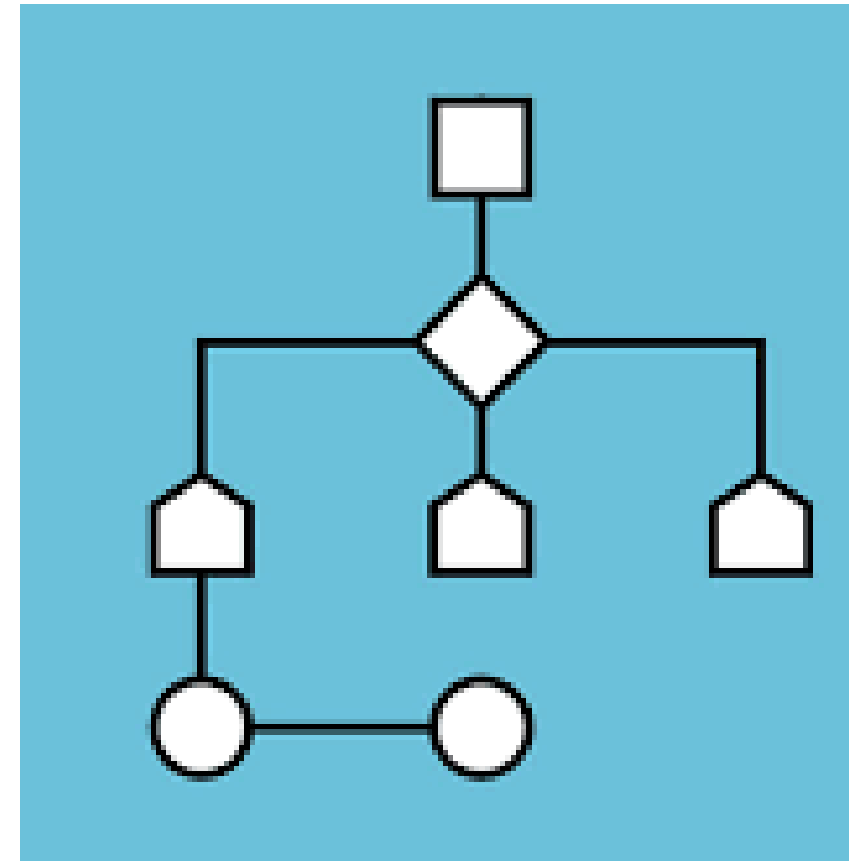
## Generative AI

- Excels at pattern creation
- It can use that **same data** and create something entirely new

# Algorithms are a Set of Rules/Instructions

---

- Both traditional software and AI contain algorithms.
- Algorithms are procedures employed for solving a problem or performing a computation.
- Algorithms act as a step-by-step list of instructions or rules specifying specific actions to be performed).



# Algorithms are like a Recipe

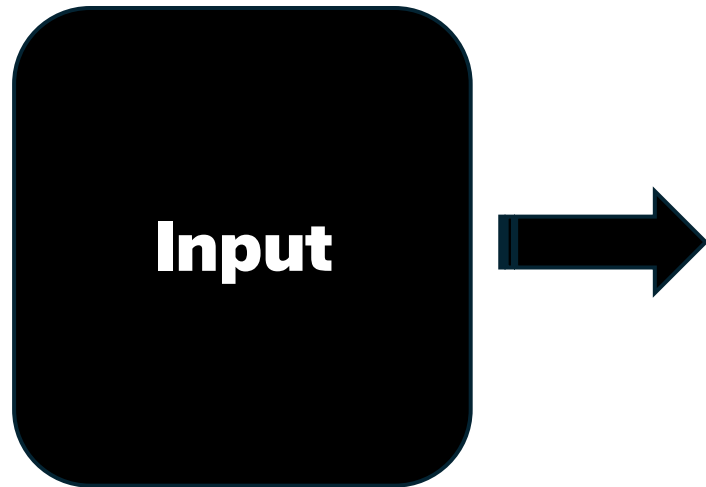


## Chocolate Chip Cookies

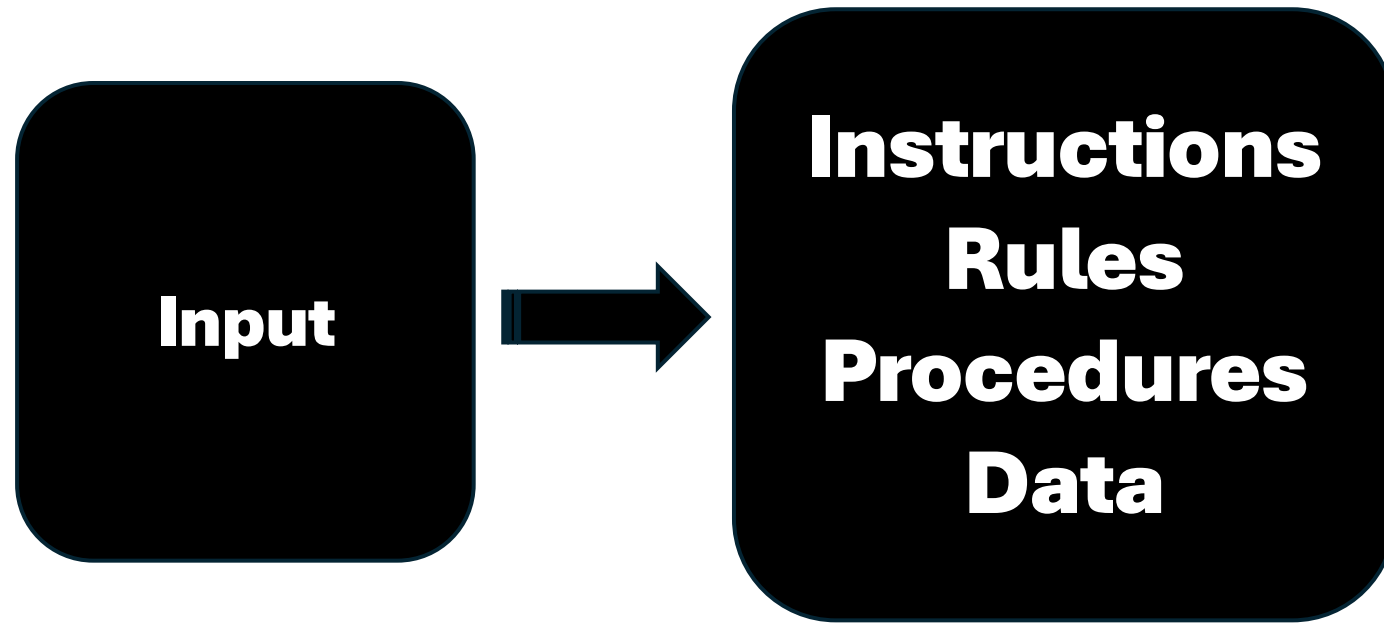
- 1. Preheat oven to 375°F.**
- 2. Combine dry ingredients (flour, sugar, baking soda).**
- 3. Add wet ingredients (eggs, melted butter) to the dry ingredients.**
- 4. Mix until combined.**
- 5. Add chocolate chips.**
- 6. Drop spoonfuls onto a baking sheet.**
- 7. Bake for 10-12 minutes.**
- 8. Let cool.**

- **Clear Instructions:** Each step in a recipe is well-defined, leaving no room for interpretation.
- **Sequential Order:** The steps must be followed in a specific order to ensure the correct outcome.
- **Reproducible Outcome:** If you follow the recipe precisely, you will get the same result every time.

# Traditional Algorithm



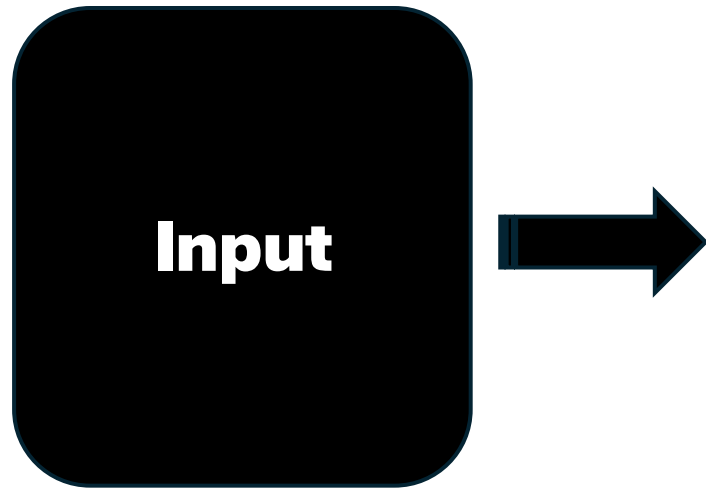
# Traditional Algorithm



# Traditional Algorithm



# Traditional Algorithm [Recipe Example]



# Traditional Algorithm [Recipe Example]

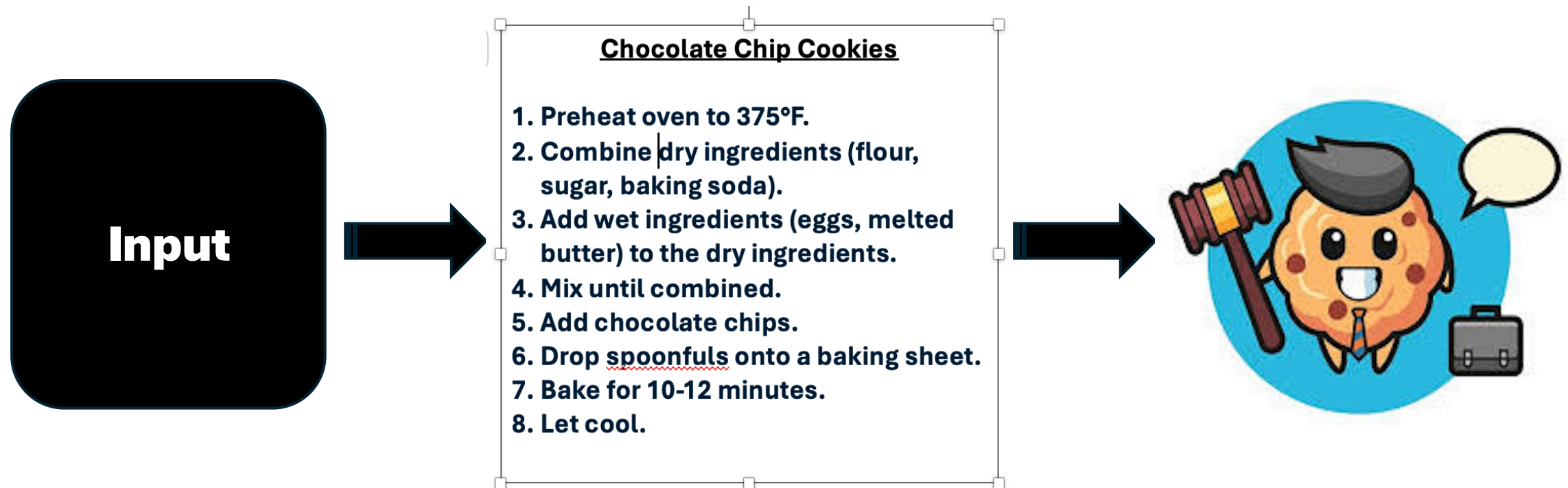
**Input**



**Chocolate Chip Cookies**

1. Preheat oven to 375°F.
2. Combine dry ingredients (flour, sugar, baking soda).
3. Add wet ingredients (eggs, melted butter) to the dry ingredients.
4. Mix until combined.
5. Add chocolate chips.
6. Drop spoonfuls onto a baking sheet.
7. Bake for 10-12 minutes.
8. Let cool.

# Traditional Algorithm [Recipe Example]



# Traditional Algorithm [Excel Example]

**Input**



1	Check number	Date	Description	Amount
2	100	2/23/2015	Water bill	\$45.00
3	101	3/24/2015	Power bill	\$67.00
4	102	4/20/2015	Internet Bill	\$50.00
5				
6				
7				
8		Total:		\$162.00
9		Check Balance:		\$523.00
10		Available:		\$361.00
11				
12				
13				
14				
15				
16				
17				
18				

# Traditional Algorithm [Excel Example]

**Input**



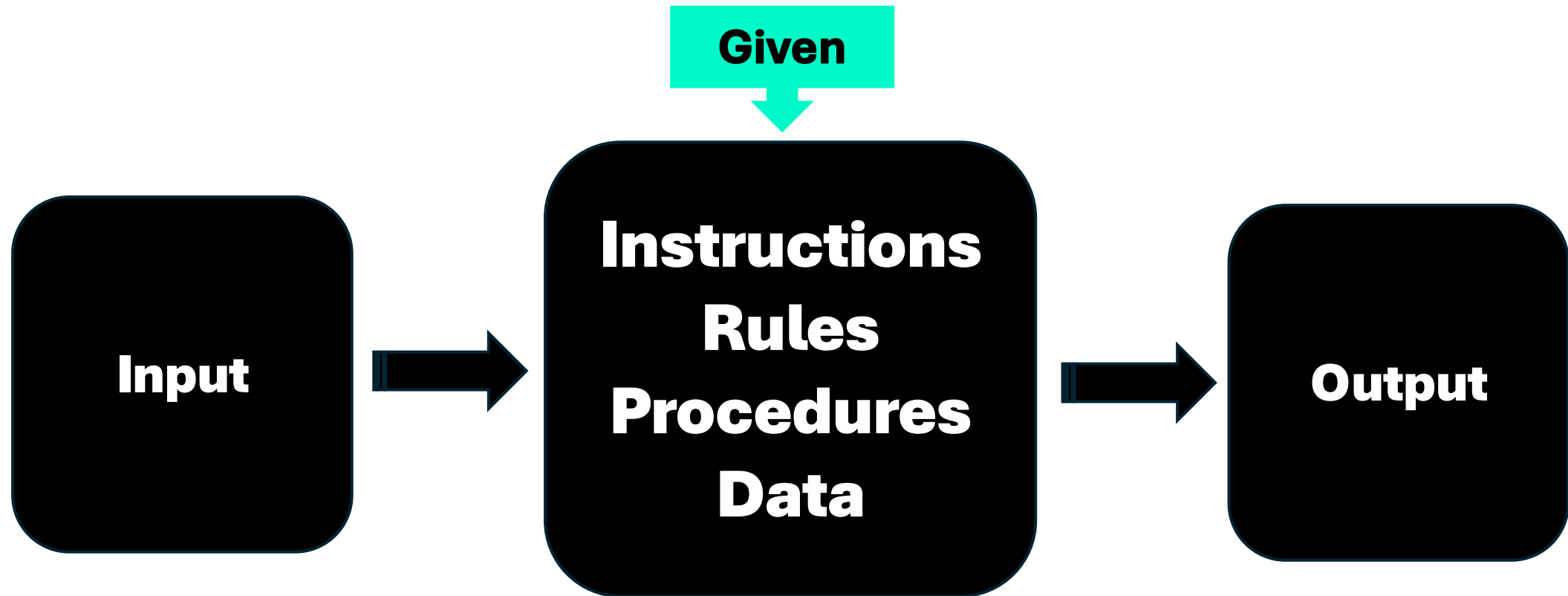
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Total:			\$162.00
Check Balance:			\$523.00
Available:			\$361.00



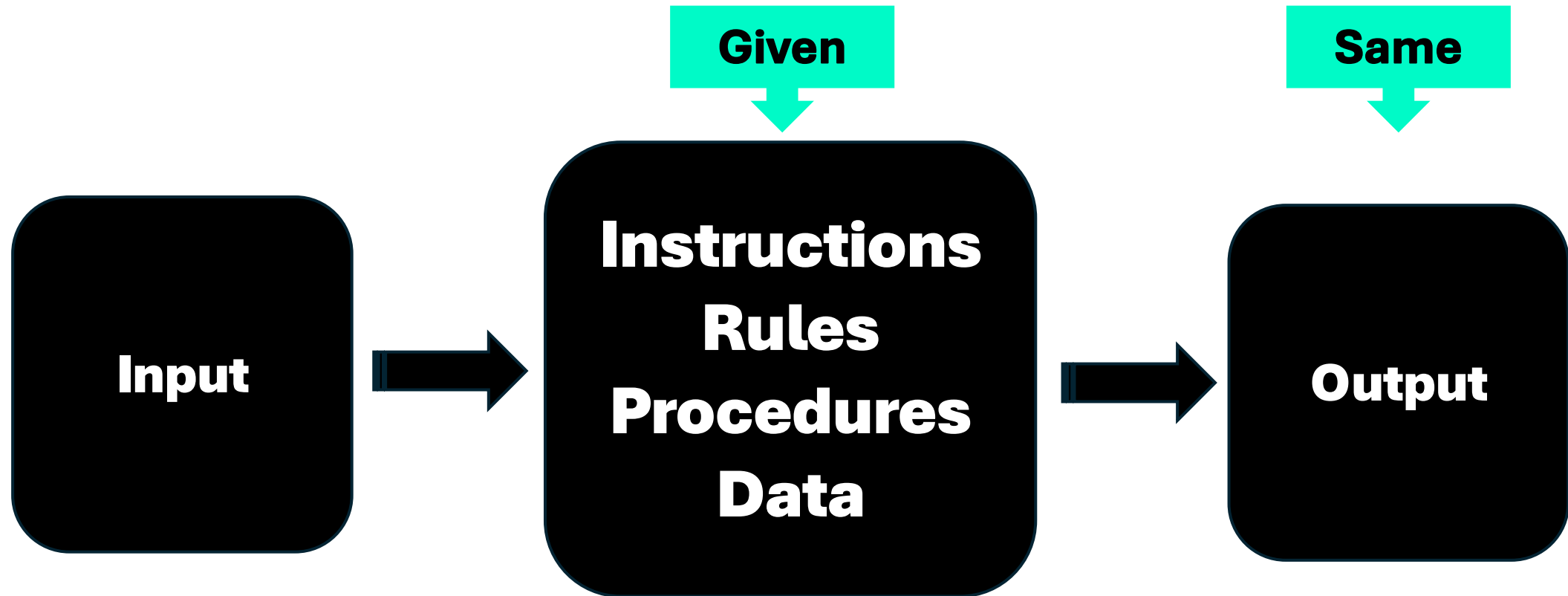
# Traditional Algorithm



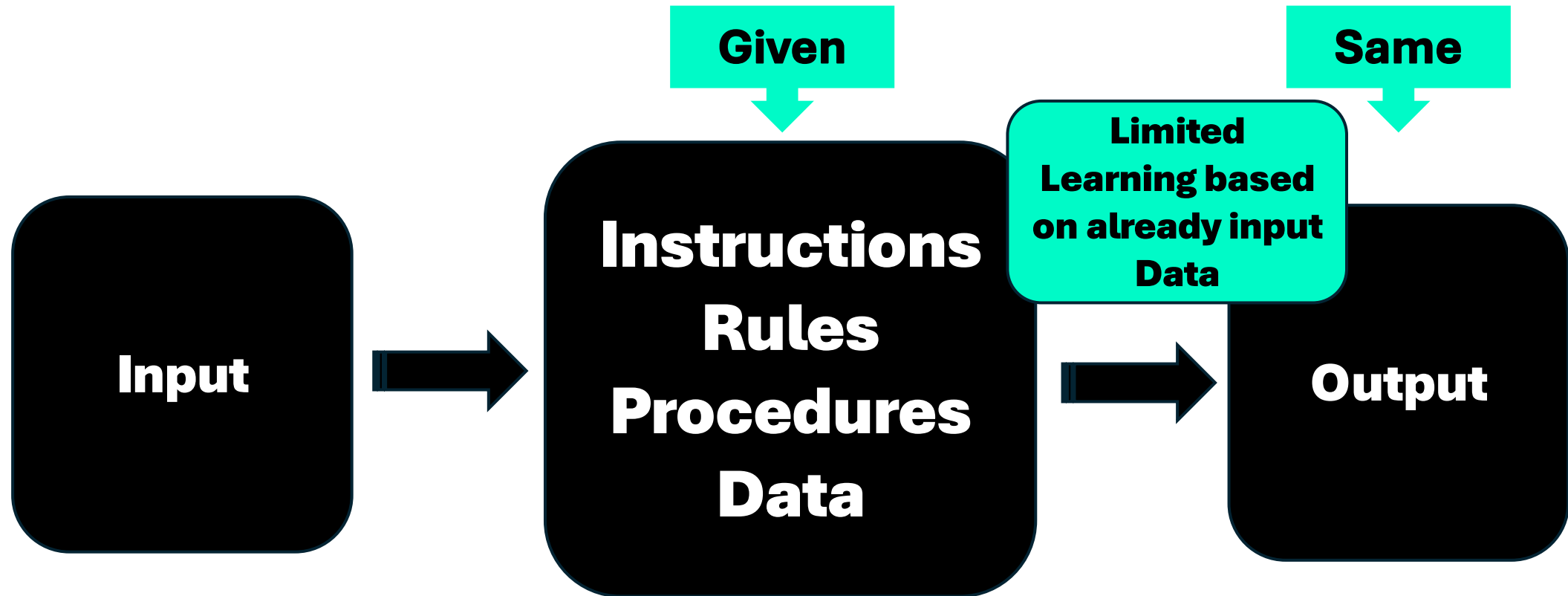
# Traditional Algorithm



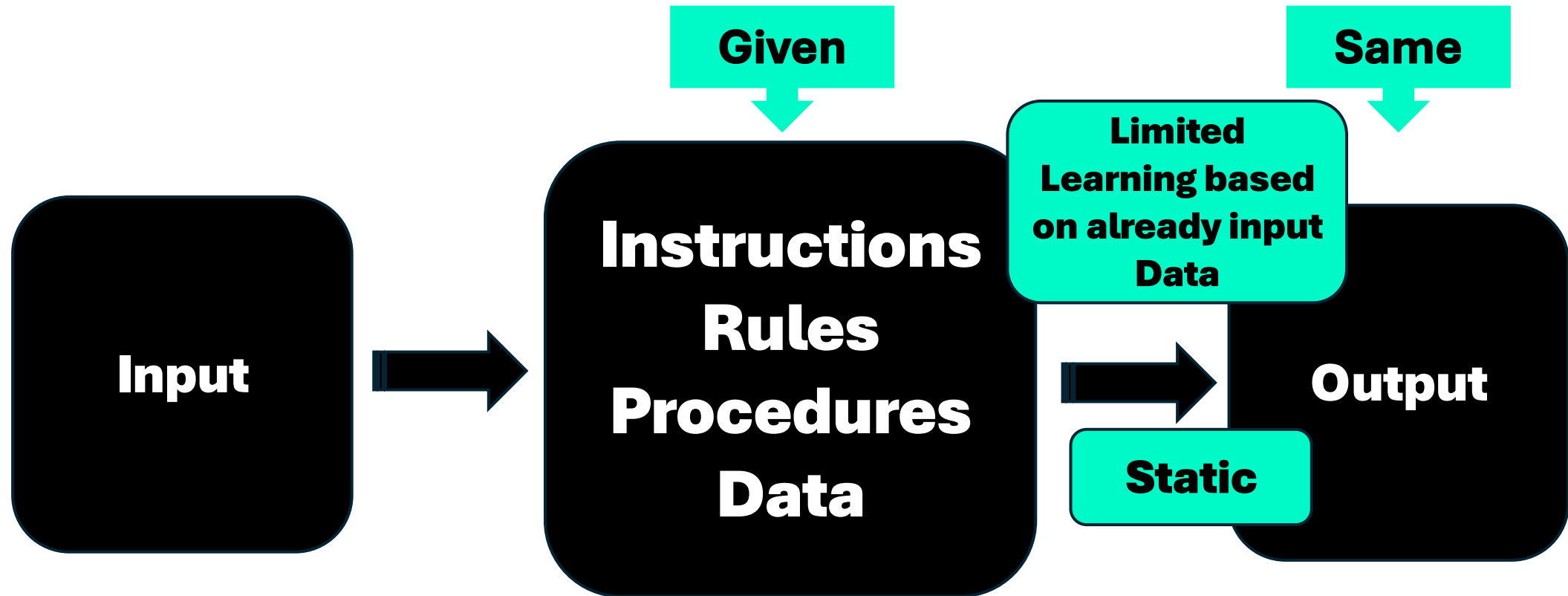
# Traditional Algorithm



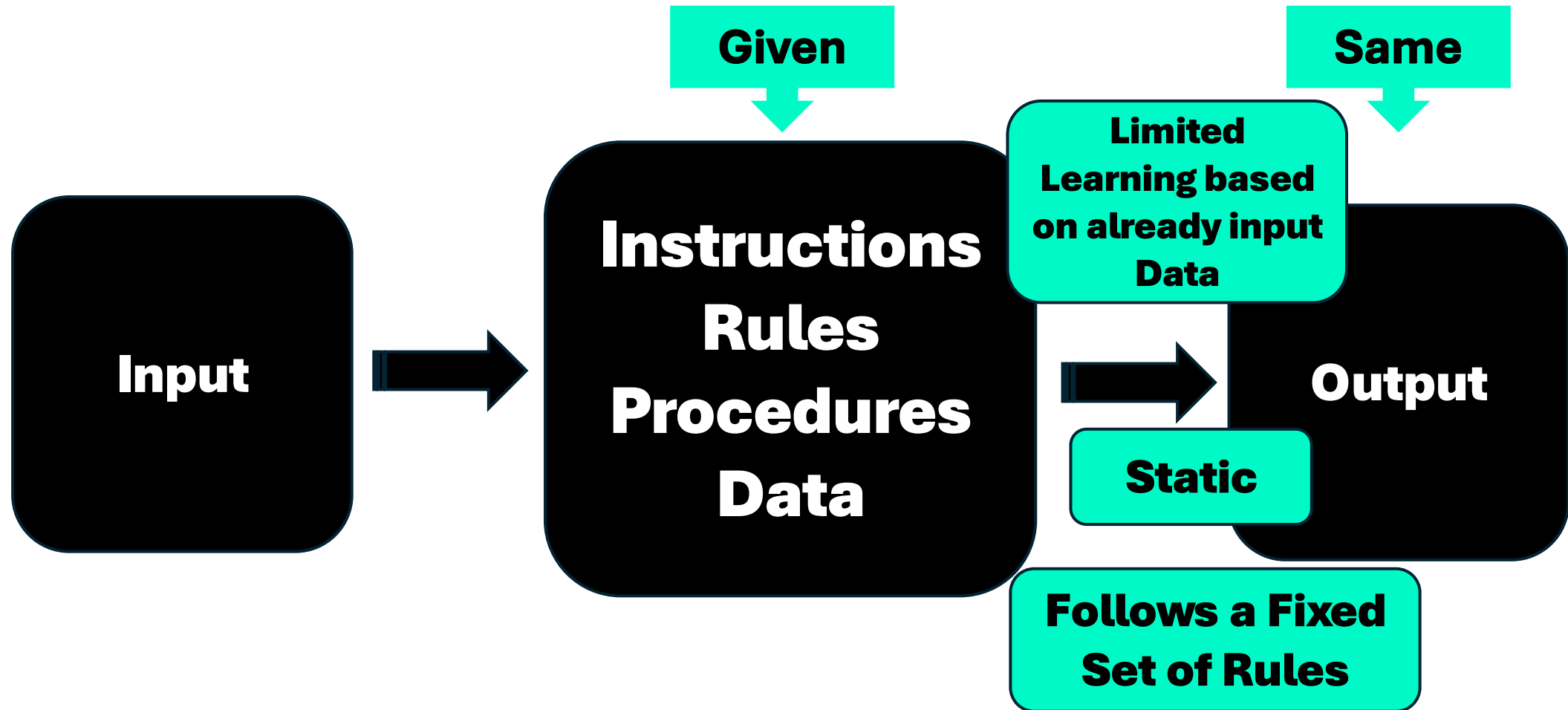
# Traditional Algorithm



# Traditional Algorithm



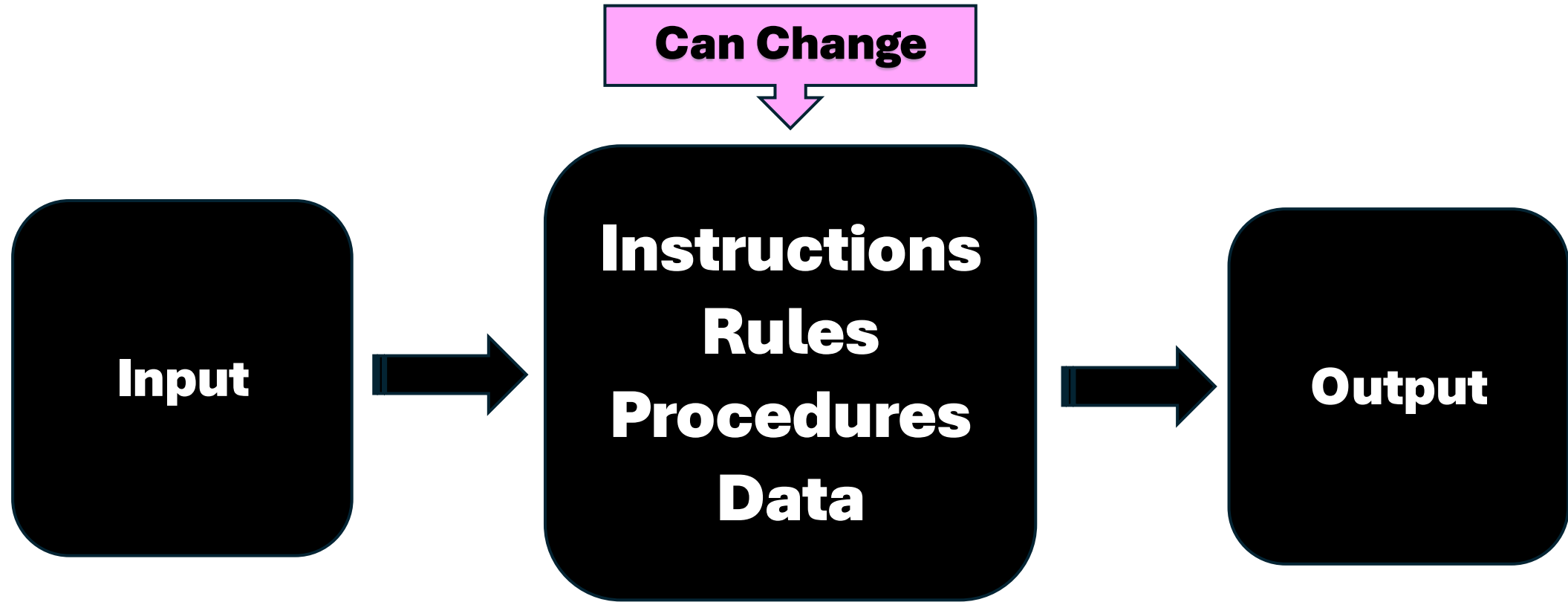
# Traditional Algorithm



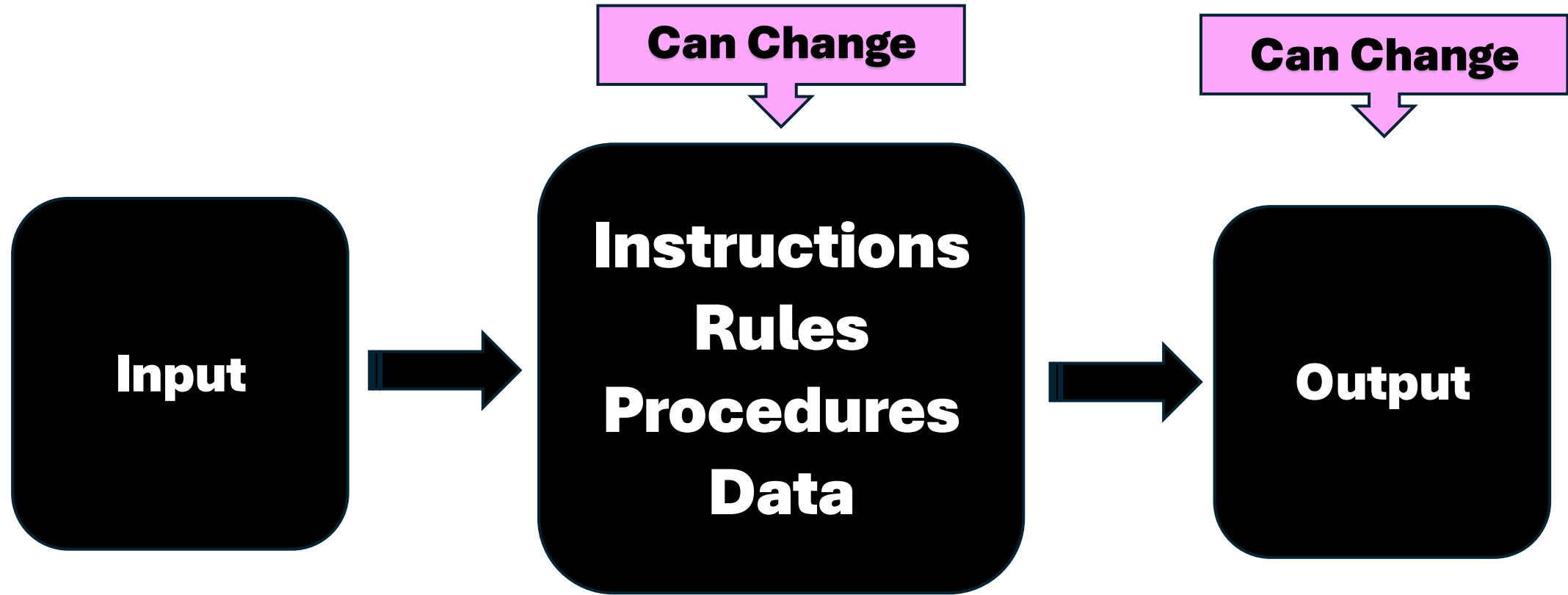
# Generative AI Algorithm



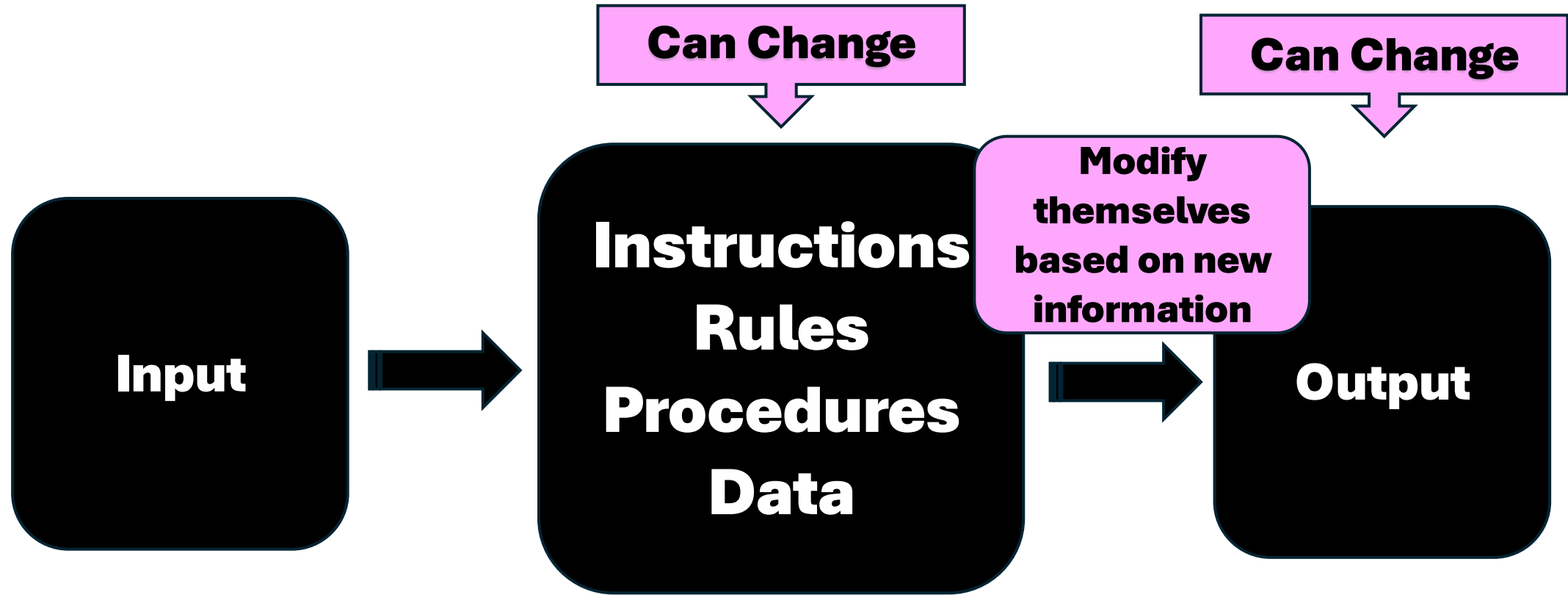
# Generative AI Algorithm



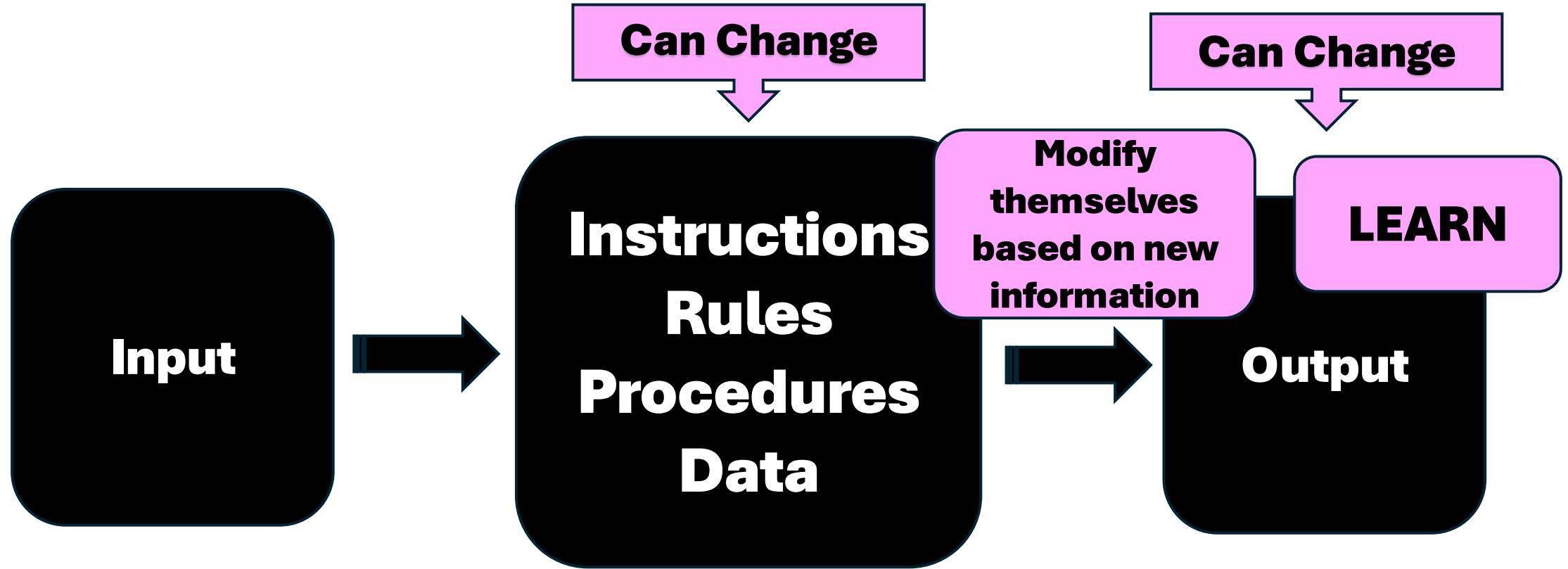
# Generative AI Algorithm



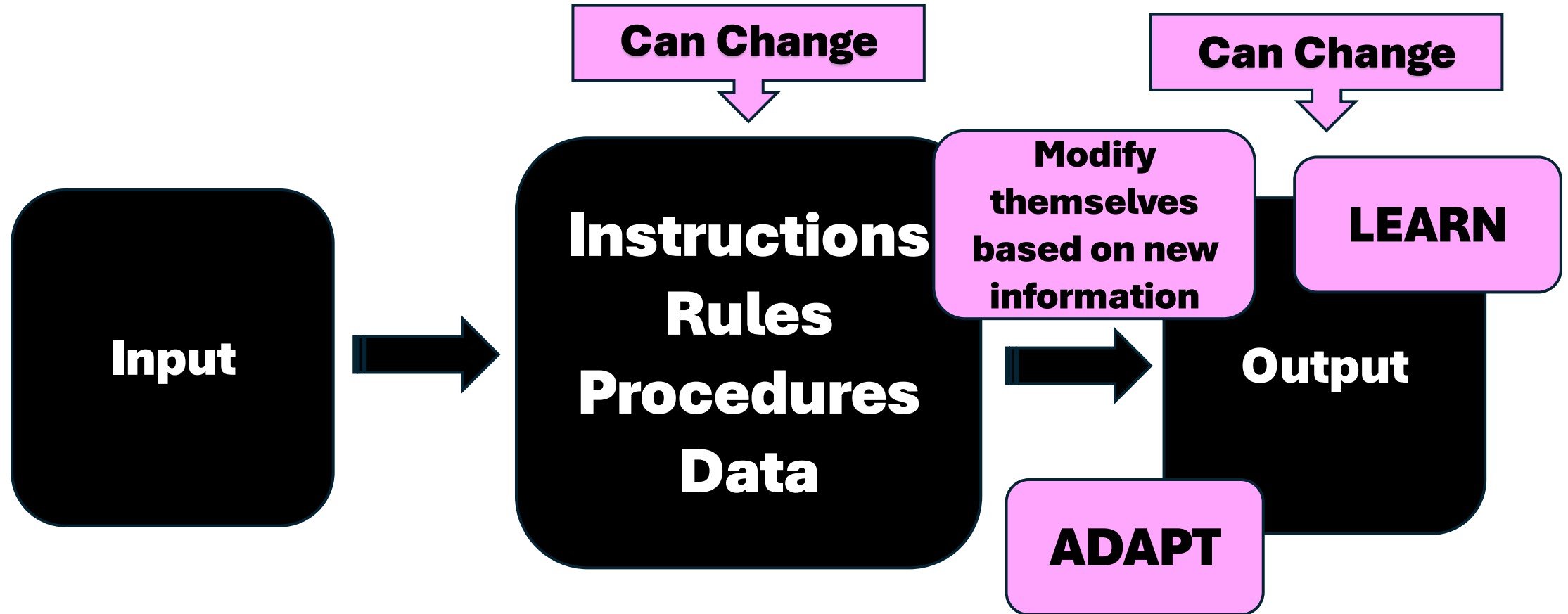
# Generative AI Algorithm



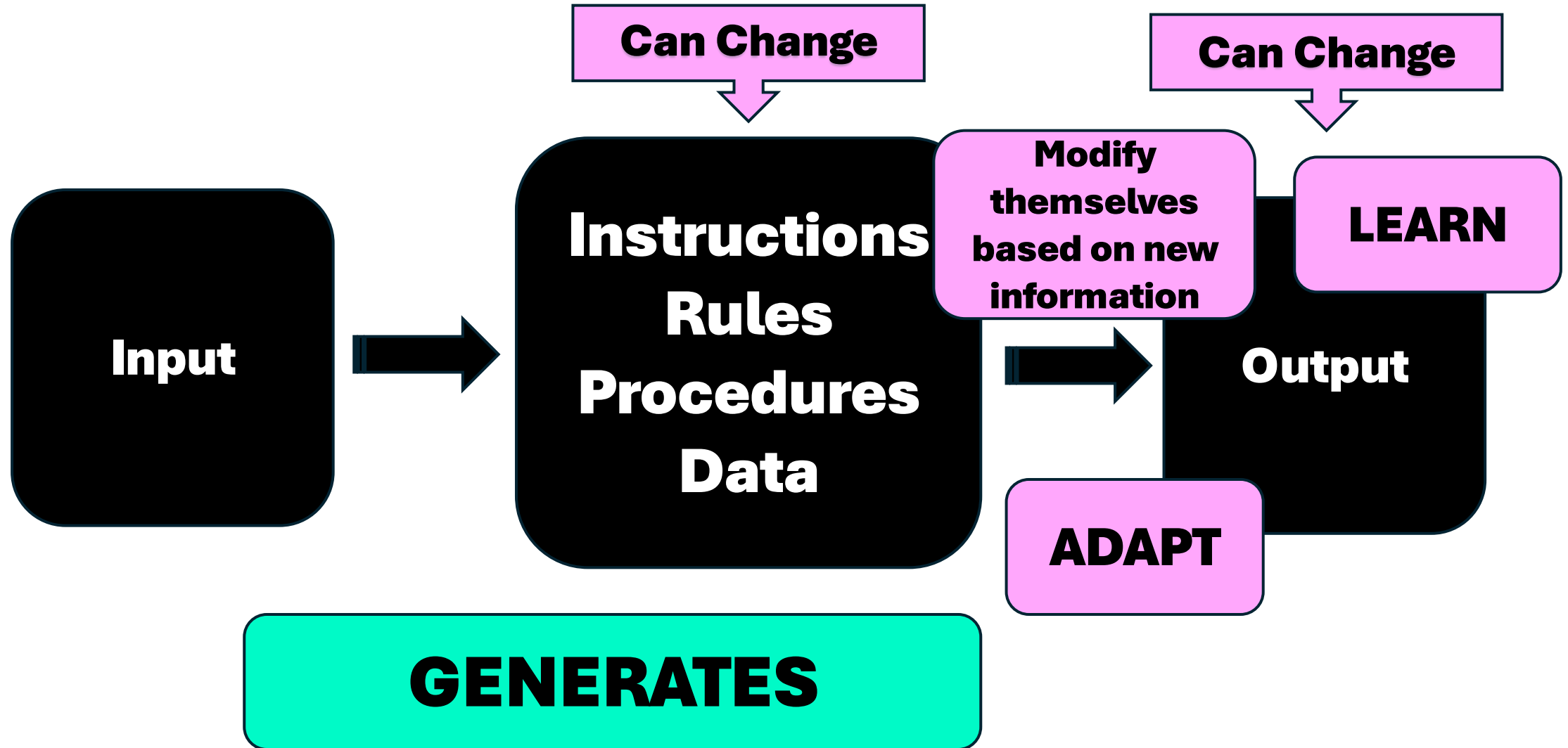
# Generative AI Algorithm



# Generative AI Algorithm



# Generative AI Algorithm





## Hybrid AI [Traditional & Generative]

Combines the strengths of both generative AI and traditional AI, leveraging **generative AI's creativity** and ability to learn from vast datasets while incorporating the **precision and reliability of traditional AI for specific, well-defined tasks.**



# Evidentiary Challenges

# AI May Learn Incorrect Patterns -Hallucinating-



- Among the most serious concerns related to AI generated algorithms and their outputs is the **lack of proper data evaluation**.
- AI are trained on data, and they learn to make algorithms which in turn make predictions by finding patterns in the data.
- However, **if the training data is incomplete or biased, the AI may learn incorrect patterns**.
- This can lead to the AI model making incorrect predictions, or “hallucinating”.
- Aviation case

# AI Algorithm



# AI Algorithm -Hallucination-



# AI Algorithm -Hallucination-



# AI Algorithm -Hallucination-





## Malfunctioning Algorithms due to AI Spoofing

- Currently, AI which relies on Internet data for learning may develop **malfunctioning algorithms due to spoofing**.
- Spoofing is the act of disguising the source of an Internet communication from an unknown source as being from a known, trusted source.
- Spoofing may first lead **to erroneous AI machine learning, subsequently to faulty algorithms and finally untrustworthy AI evidence**.



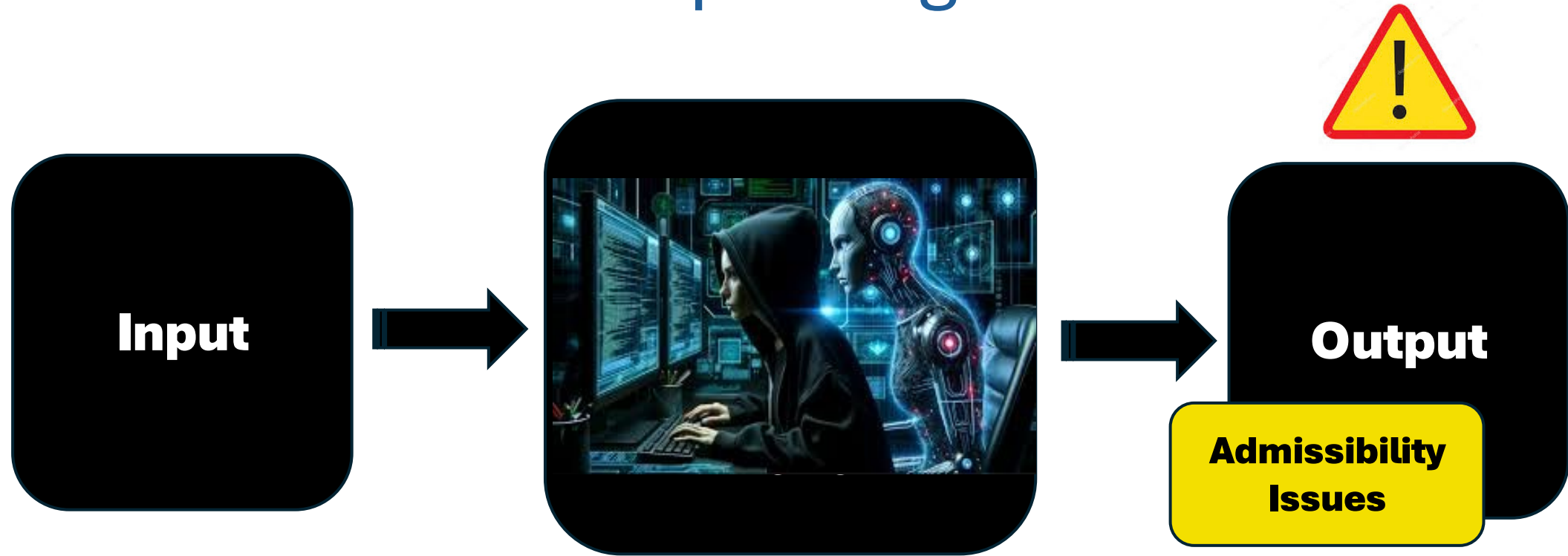
# AI Algorithm -Spoofing-

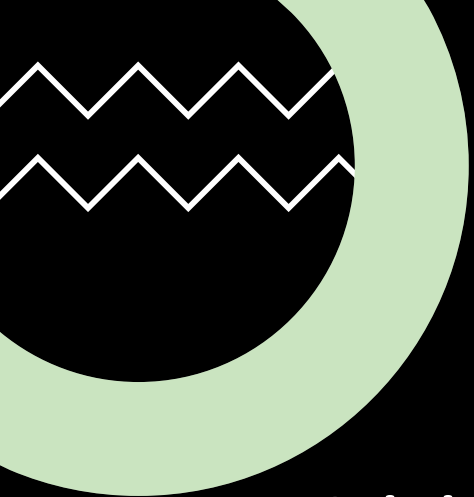


# AI Algorithm -Spoofing-



# AI Algorithm -Spoofing-





## Adversarial AI Use [AI's corrupting other AI's – “getting poisoned”]

- It is increasingly difficult to distinguish human generated Internet content from AI generated Internet content.
- Consequently, **AI's have been used to corrupt other AI's.**
- This practice known as adversarial AI uses AI to fool machine-learning models by supplying deceptive input(s).
- Adversarial AI can be used to modify the output of most AI technology.



# AI Algorithm

-Adversarial AI / Poisoned -



# AI Algorithm

-Adversarial AI / Poisoned -



# AI Algorithm

-Adversarial AI / Poisoned -



# AI Algorithm

-Adversarial AI / Poisoned -



# Admissibility Analysis: Resilience [or Lack of]

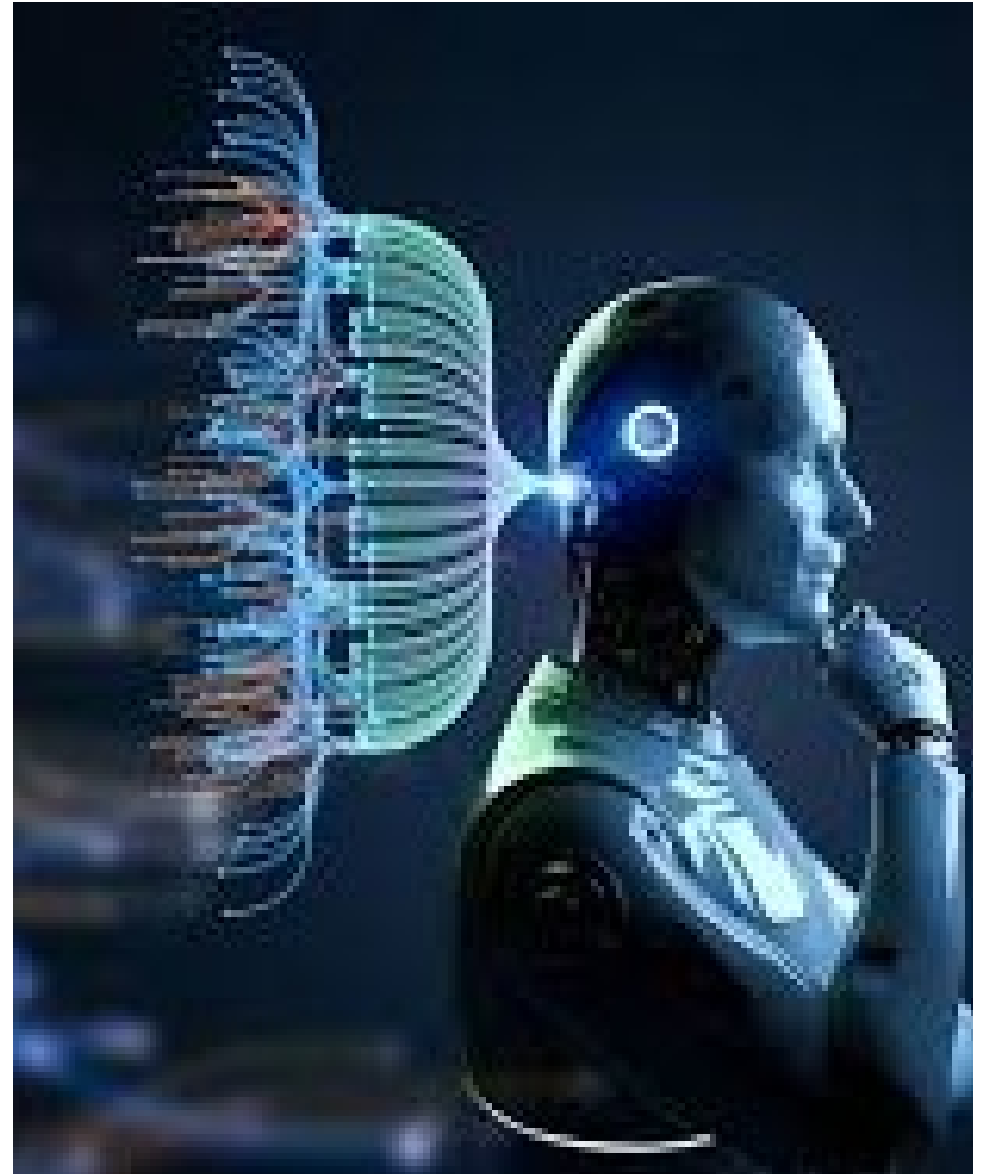
One challenge for AI evidence admissibility is resilience.

Resilience is the degree to which an AI resists both intentional and unintentional efforts to cause machine-learning models to fail.



# Admissibility Analysis: Transparency & Explainability [or Lack of]

- In considering admissibility, courts should require **transparency** and **explainability**:
  - in terms of how the AI system works
  - how the AI system reached its decision
  - How the AI system reached its classification
  - How the AI system reached its prediction/conclusion



# Transparency = Explanations Must Reveal Inner Workings



AI evidence admissibility should [must] provide explanations that **reveal their inner workings** and **how the AI amends its algorithms** such that AI algorithms are explainable.

Such information must be sufficient for the party against whom that evidence will be offered to determine the validity (including the accuracy of the AI) and the reliability (i.e., the AI algorithm correctly measures what it purports to measure).

# Analysis



# The Evidence

- **Husband and Wife have been having marital difficulties.**
- **Both have made an extra effort to make things work because they do not want their small children's lives disrupted by a divorce, and they each secretly fear that the other will try to take custody of the children.**
- **Despite their best efforts, it appears the end of their marriage is inevitable.**



# The Evidence

**On the advice of a friend who recently divorced, Wife begins keeping copious records of parenting time, parental tasks performed, parental participation, positives and negatives of each parent and all of the things that Wife has been told by her friend might be considered in a custody fight.**



# The Evidence

**While researching everything she can find on the internet about custody disputes, Wife comes across an advertisement for an app called “BestParentPicker” a/k/a “BPP” that purports to “analyze factual information combined with applicable statutes, case law and expert opinions to assist in a realistic determination and comparison of parenting skills”**



# The Evidence

- **Wife answers the App's queries and downloads the information that she has been recording.**
- **The App then generated a report giving each parent a "parenting score" and outlining recommendations for conservatorship and parenting time.**
- **To wife's relief, Wife gets a higher score. The report recommends her for primary conservatorship, provides a recommended parenting schedule for Husband, and lays out the rational for the entirety of the conclusion.**



# Prerequisites to Admissibility

- **Relevant**
  - **TRE 401**
- **Probative Value vs. Unfair Prejudice (and other limitations)**
  - **TRE 403**
- **Authentic**
  - **TRE 901-902**
- **Not Hearsay**
  - **TRE 801-805**
- **Original or Duplicate**
  - **TRE 1001**



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# TEXAS RULES OF EVIDENCE

**Compare to Charts  
in Final Portion of Presentation**

Applicable Statutes  
[to the theoretical  
analysis presented]

# Potential Authentication/Admissibility Analysis

## TRE 901/602

**TRE 901(a) requires evidence to be authenticated prior to consideration by the finder of fact.**

**This includes AI**

**TRE 901(b) discloses a variety of ways in which a party can achieve this objective.**

**No special exception is made for AI evidence.**

## TRE 901(a)

# Authenticating or Identifying Evidence: IN GENERAL

**(a) In General.** To satisfy the requirement of authenticating or identifying an item of evidence, the proponent must produce evidence sufficient to support a finding that the item is what the proponent claims it is.

- **It is what I say it is.**

# TRE 901(b) Examples

**(b) Examples.** The following are examples only — not a complete list — of evidence that satisfies the requirement:

- (1) *Testimony of a Witness with Knowledge*** . Testimony that an item is what it is claimed to be.
- (2) *Nonexpert Opinion About Handwriting*** . A nonexpert's opinion that handwriting is genuine, based on a familiarity with it that was not acquired for the current litigation.
- (3) *Comparison by an Expert Witness or the Trier of Fact*** . A comparison with an authenticated specimen by an expert witness or the trier of fact.
- (4) *Distinctive Characteristics and the Like*** . The appearance, contents, substance, internal patterns, or other distinctive characteristics of the item, taken together with all the circumstances.
- (5) *Opinion About a Voice*** . An opinion identifying a person's voice — whether heard firsthand or through mechanical or electronic transmission or recording — based on hearing the voice at any time under circumstances that connect it with the alleged speaker.
- (6) *Evidence About a Telephone Conversation*** . For a telephone conversation, evidence that a call was made to the number assigned at the time to:
  - (A)** a particular person, if circumstances, including self-identification, show that the person answering was the one called; or

- (B)** a particular business, if the call was made to a business and the call related to business reasonably transacted over the telephone.

**(7) *Evidence About Public Records*** . Evidence that:

- (A)** a document was recorded or filed in a public office as authorized by law; or
- (B)** a purported public record or statement is from the office where items of this kind are kept.

**(8) *Evidence About Ancient Documents or Data Compilations*** . For a document or data compilation, evidence that it:

- (A)** is in a condition that creates no suspicion about its authenticity;
- (B)** was in a place where, if authentic, it would likely be; and
- (C)** is at least 20 years old when offered.

**(9) *Evidence About a Process or System*** . Evidence describing a process or system and showing that it produces an accurate result.

**(10) *Methods Provided by a Statute or Rule*** . Any method of authentication or identification allowed by a federal statute or a rule prescribed by the Supreme Court.

# TRE 901(b)(1)

## Examples: Testimony of Witness With Knowledge

**(b) Examples.** The following are examples only — not a complete list — of evidence that satisfies the requirement:

**(1) Testimony of a Witness with Knowledge .** Testimony that an item is what it is claimed to be.

**(2) Nonexpert Opinion About Handwriting .** A nonexpert's opinion that handwriting is genuine, based on a familiarity with it that was not acquired for the current litigation.

**(3) Comparison by an Expert Witness or the Trier of Fact .** A comparison with an authenticated specimen by an expert witness or the trier of fact.

**(4) Distinctive Characteristics and the Like .** The appearance, contents, substance, internal patterns, or other distinctive characteristics of the item, taken together with all the circumstances.

**(5) Opinion About a Voice .** An opinion identifying a person's voice — whether heard firsthand or through mechanical or electronic transmission or recording — based on hearing the voice at any time under circumstances that connect it with the alleged speaker.

**(6) Evidence About a Telephone Conversation .** For a telephone conversation, evidence that a call was made to the number assigned at the time to:

**(A)** a particular person, if circumstances, including self-identification, show that the person answering was the one called; or

**(B)** a particular business, if the call was made to a business and the call related to business reasonably transacted over the telephone.

**(7) Evidence About Public Records .** Evidence that:

**(A)** a document was recorded or filed in a public office as authorized by law; or

**(B)** a purported public record or statement is from the office where items of this kind are kept.

**(8) Evidence About Ancient Documents or Data Compilations .** For a document or data compilation, evidence that it:

**(A)** is in a condition that creates no suspicion about its authenticity;

**(B)** was in a place where, if authentic, it would likely be; and

**(C)** is at least 20 years old when offered.

**(9) Evidence About a Process or System .** Evidence describing a process or system and showing that it produces an accurate result.

**(10) Methods Provided by a Statute or Rule .** Any method of authentication or identification allowed by a federal statute or a rule prescribed by the Supreme Court.

# TRE 901(b)(1)

## Examples: Testimony of Witness With Knowledge

**(b) Examples.** The following are examples only — not a complete list — of evidence that satisfies the requirement:

**(1) Testimony of a Witness with Knowledge .** Testimony that an item is what it is claimed to be.

# TRE 602

## Need for Personal Knowledge

A witness may testify to a matter only if evidence is introduced sufficient to support a finding that the witness has personal knowledge of the matter. Evidence to prove personal knowledge may consist of the witness's own testimony.

\*This rule does not apply to a witness's expert testimony under Rule 703.

# TRE 901(b)(9)

## Examples: Evidence About a Process or System

(b) **Examples.** The following are examples only — not a complete list — of evidence that satisfies the requirement:

(1) **Testimony of a Witness with Knowledge** . Testimony that an item is what it is claimed to be.

(2) **Nonexpert Opinion About Handwriting** . A nonexpert's opinion that handwriting is genuine, based on a familiarity with it that was not acquired for the current litigation.

(3) **Comparison by an Expert Witness or the Trier of Fact** . A comparison with an authenticated specimen by an expert witness or the trier of fact.

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(A) a particular person, if circumstances, including self-identification, show that the person answering was the one called; or

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(7) **Evidence About Public Records** . Evidence that:

(A) a document was recorded or filed in a public office as authorized by law; or

(B) a purported public record or statement is from the office where items of this kind are kept.

(8) **Evidence About Ancient Documents or Data Compilations** . For a document or data compilation, evidence that it:

(A) is in a condition that creates no suspicion about its authenticity;

(B) was in a place where, if authentic, it would likely be; and

(C) is at least 20 years old when offered.

(9) **Evidence About a Process or System** . Evidence describing a process or system and showing that it produces an accurate result.

(10) **Methods Provided by a Statute or Rule** . Any method of authentication or identification allowed by a federal statute or a rule prescribed by the Supreme Court.



# TRE 901(b)(9)

## Examples: Evidence About a Process or System

**(9)** Evidence About a Process or System . Evidence describing a process or system and showing that **it produces an accurate result.**

# TRE 602

## Need for Personal Knowledge

A witness may testify to a matter only if evidence is introduced sufficient to support a finding that the witness has personal knowledge of the matter. Evidence to prove personal knowledge may consist of the witness's own testimony.

\*This rule does not apply to a witness's expert testimony under Rule 703.

A witness with knowledge of the AI (underlying data/algorithms) needs to provide admissible evidence [testimony]:

- that the AI is what it claims to be
  - TRE 901(a)
- describe the process or system
  - TRE 901(b)(1) and (b)(9)
- show that the process or system described produces an accurate result.
  - TRE 901(b)(9)

Since AI programming is not common knowledge, it is expected that TRE 602 will apply requiring the authenticating witness to have personal knowledge of how the AI technology functions or be established as an expert.

## AI Authentication & Admissibility TRE 901 & 602

AI  
Authentication  
TRE 901 & 602  
needs an expert  
TRE 702-3

- AI usually requires both machine learning and generative elements.
- **It is therefore unlikely, due to the multiple skill/knowledge sets required, that a single witness will be sufficient for admissibility purposes.**
- The AI machine (that is AI in its broadest sense) normally requires one set of skills to teach a computer to understand certain data and perform certain tasks.
- Generative AI (the kind of AI you can use to create new text, visual, and audio content) normally requires one set of skills to build on that foundation and adds new capabilities that attempt to mimic human intelligence, creativity and autonomy.

# TRE 702 Testimony by Expert Witnesses

## Testimony by Expert Witnesses

A **witness who is qualified as an expert** by knowledge, skill, experience, training, or education **may testify** in the form of an opinion or otherwise if the proponent demonstrates to the court that it is more likely than not that:

- (a)** the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b)** the testimony is based on sufficient facts or data;
- (c)** the testimony is the product of reliable principles and methods; and
- (d)** the expert's opinion reflects a reliable application of the principles and methods to the facts of the case.

## **TRE 703**

# **Bases of an Expert**

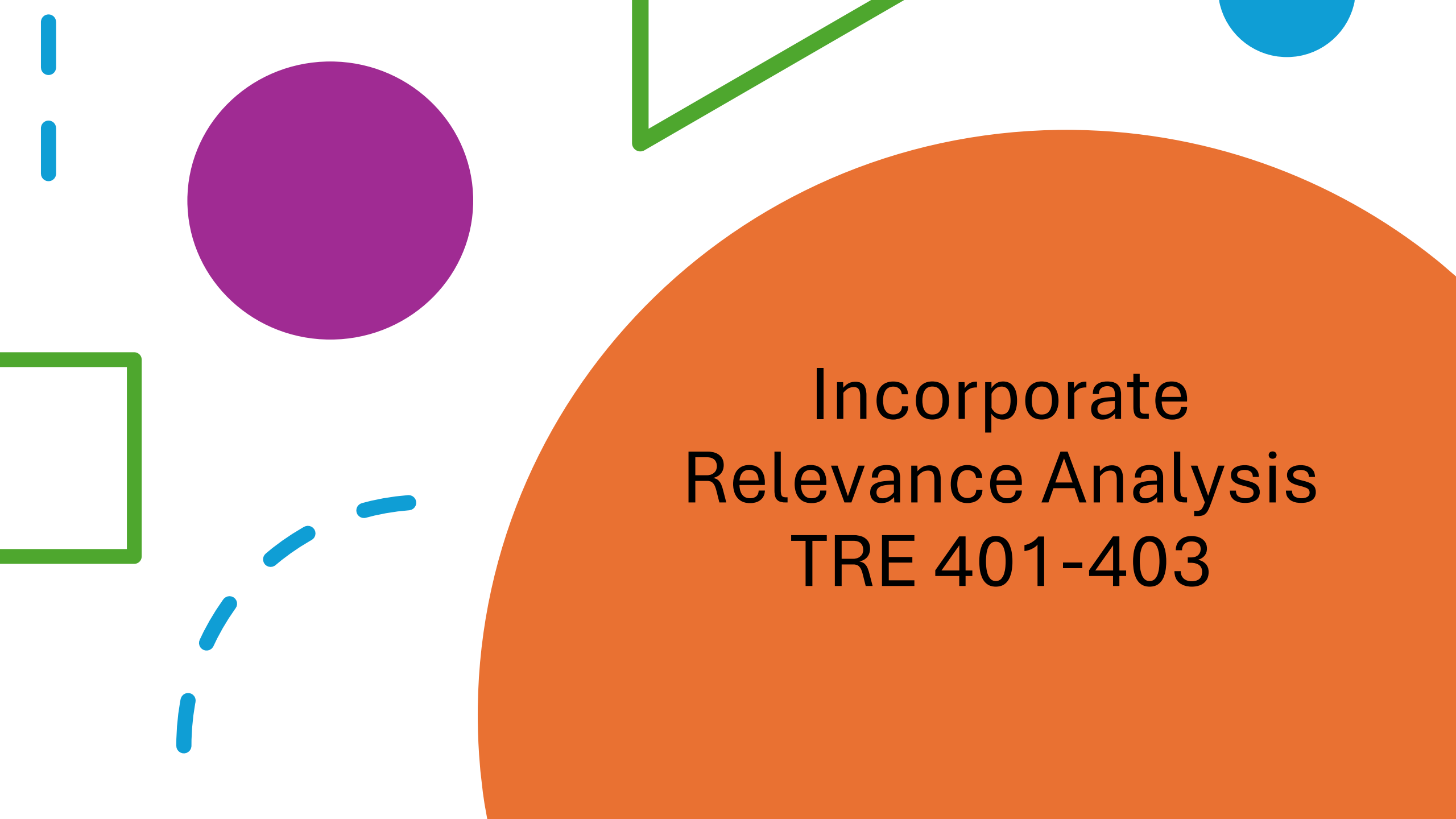
An **expert may base an opinion on** facts or data in the case that the expert has been made aware of or personally observed. If experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject, they need not be admissible for the opinion to be admitted. But if the facts or data would otherwise be inadmissible, the proponent of the opinion may disclose them to the jury only if their probative value in helping the jury evaluate the opinion substantially outweighs their prejudicial effect.

**TRE 705**  
**Disclosing**  
**Facts or Data**  
**Underlying an**  
**Expert**

Unless the court orders otherwise, an expert may state an opinion — and give the reasons for it — without first testifying to the underlying facts or data. **But the expert may be required to disclose those facts or data on cross-examination.**

# Data/Expert Related Admissibility Issues

- Admissibility of AI evidence is likely to face objections due to the **lack of rigorous testing.**
- Even when AI algorithm testing is performed, it is **rarely independent, peer-reviewed, or sufficiently transparent to be properly assessed** by those competent to do so.
- Computer-based evidence, such as AI evidence should be based on scientific methods that are sufficiently established and accepted. **Since there are no standards for AI algorithms testing generally nor AI product testing specifically, it will be difficult to have an expert opinion that the AI evidence is admissible because it is “generally accepted” as reliable in the relevant scientific community.**



Incorporate  
Relevance Analysis  
TRE 401-403

# TRE 401

## Test for Relevant Evidence

Evidence is relevant if:

- (a)** it has any tendency to make a fact more or less probable than it would be without the evidence; and
- (b)** the fact is of consequence in determining the action.

# TRE 401 is generally read in conjunction with TRE 402 and the limitations of TRE 403

- **TRE 401** defines relevant evidence
- **TRE 402** says relevant evidence is admissible
- **TRE 403** limits TRE 401 and TRE 402 by potentially excluding relevant evidence if its probative value is substantially outweighed by a danger of: unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence.

**TRE 705  
Read in  
Conjunction  
with  
TRE 403**

**TRE 705** may require disclosure of underlying data [on cross examination]. **TRE 403** could [AND SHOULD] therefore be translated to state that a court cannot make the determinations unless the party offering the AI evidence is prepared to disclose underlying data. This would include the training data, as well as the development and operation of the AI system sufficient to allow the opposing party to challenge it.

**TRE 901(a)**  
**[Authentic]**

**TRE 901(a)**  
**[Authentic]**



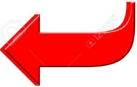
**TRE 901(b)**  
**[Examples]**

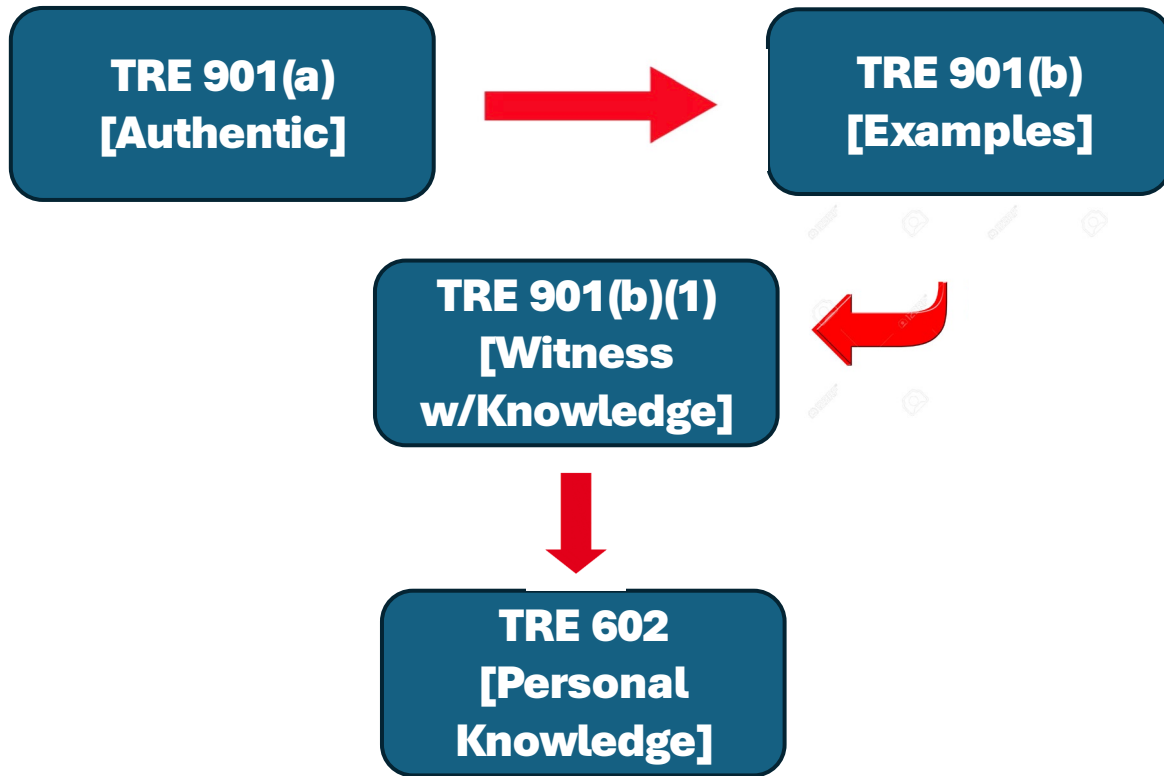
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**[Authentic]**

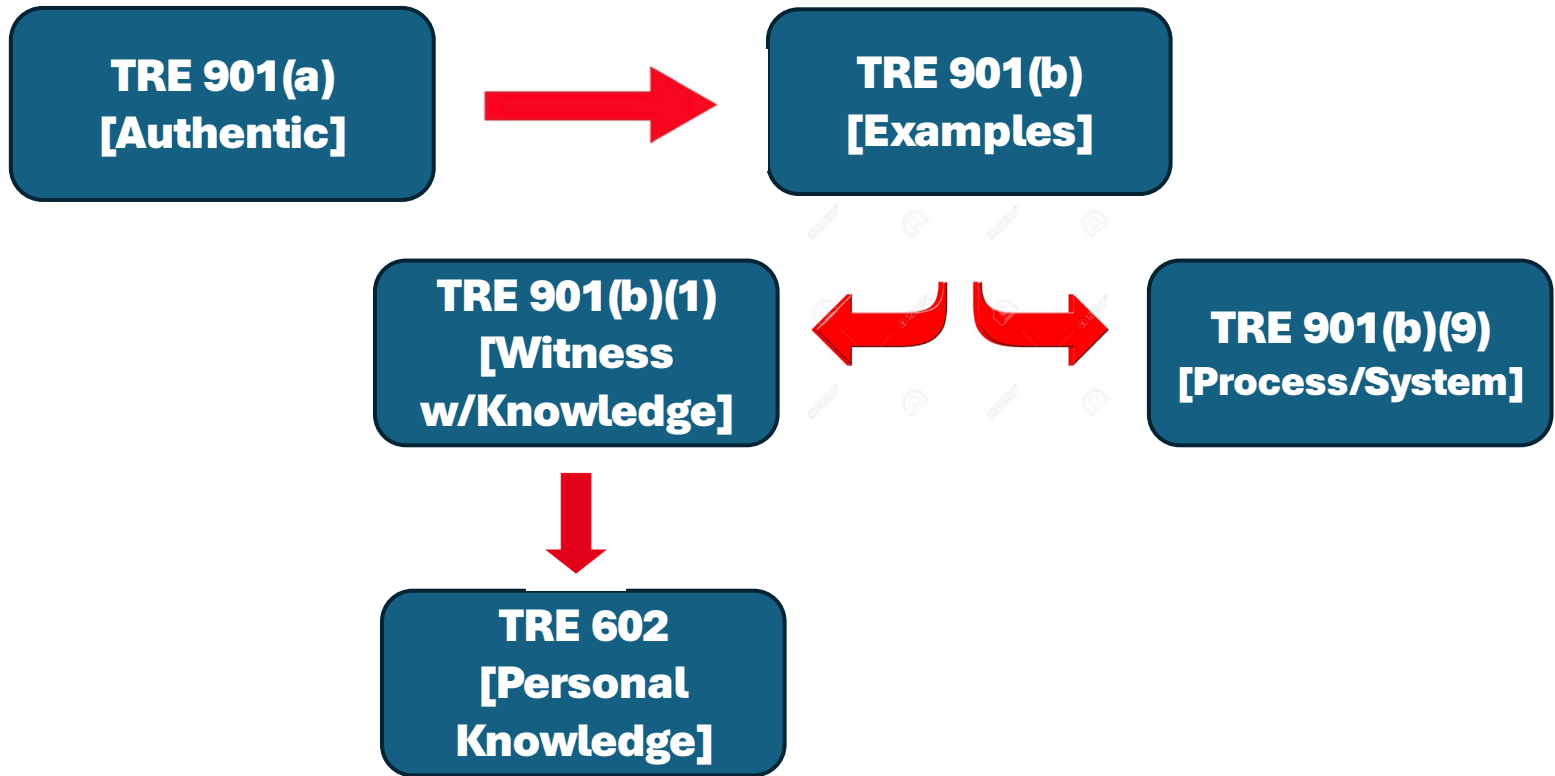


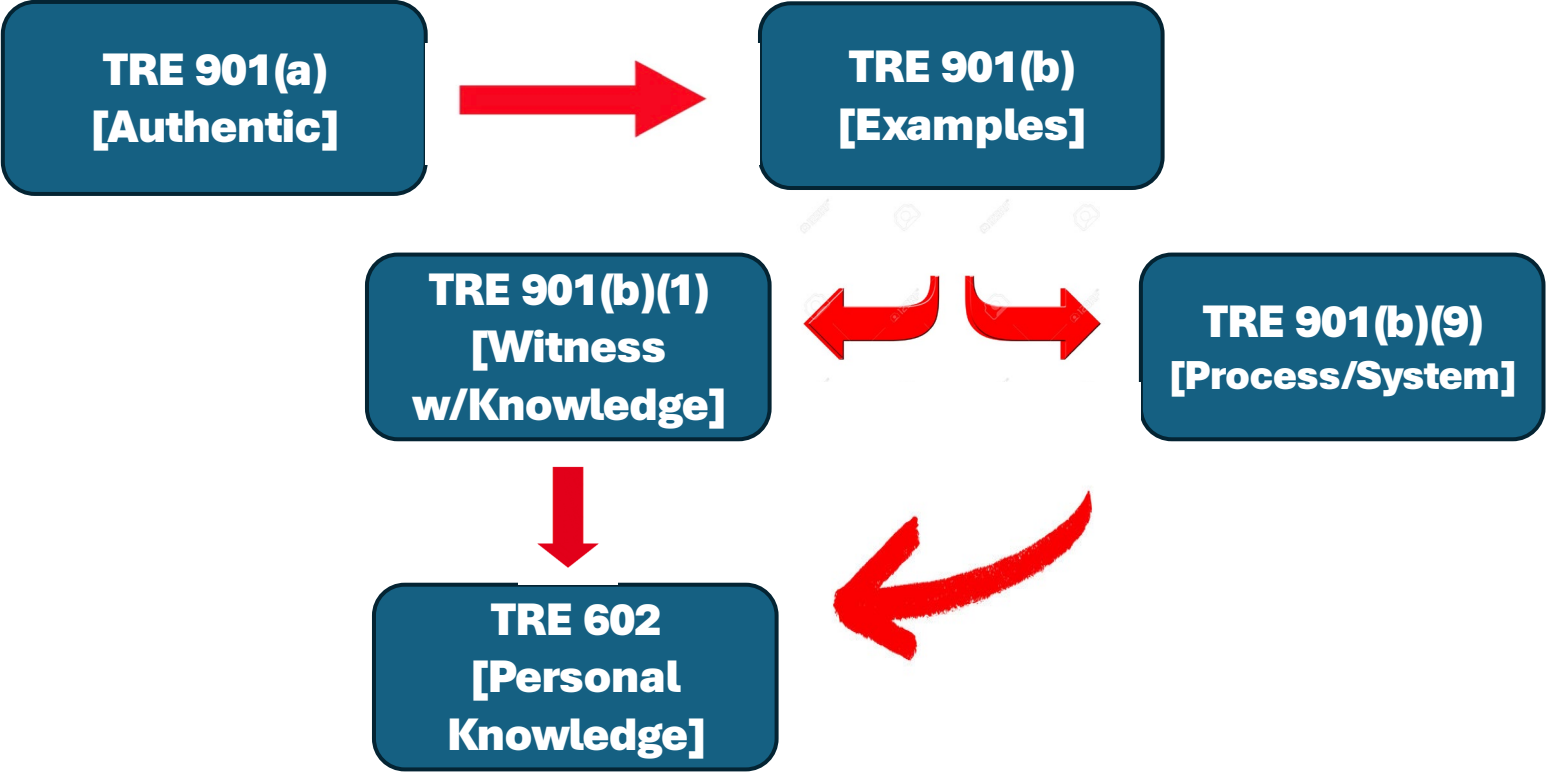
**TRE 901(b)**  
**[Examples]**

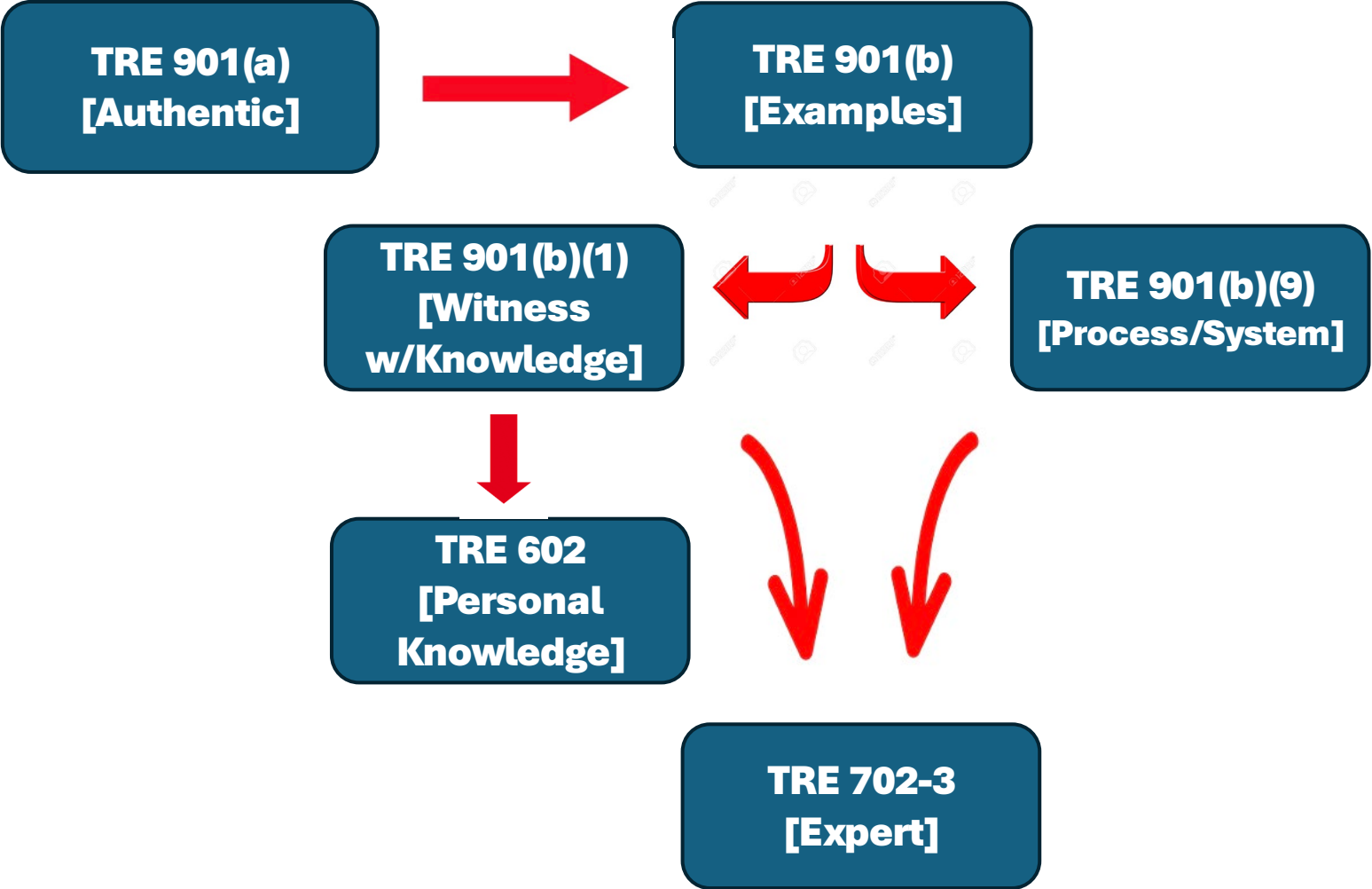
**TRE 901(b)(1)**  
**[Witness**  
**w/Knowledge]**

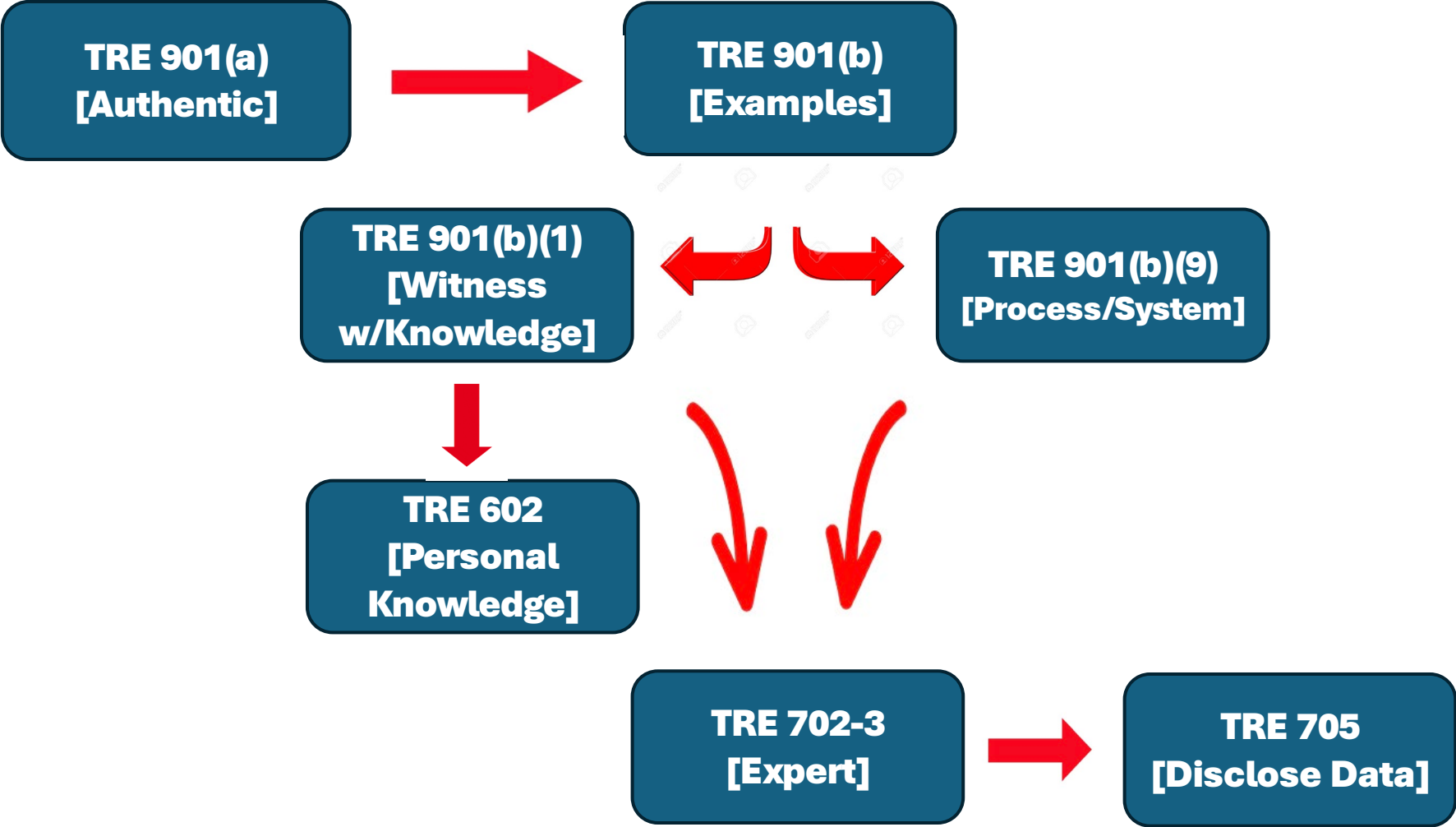


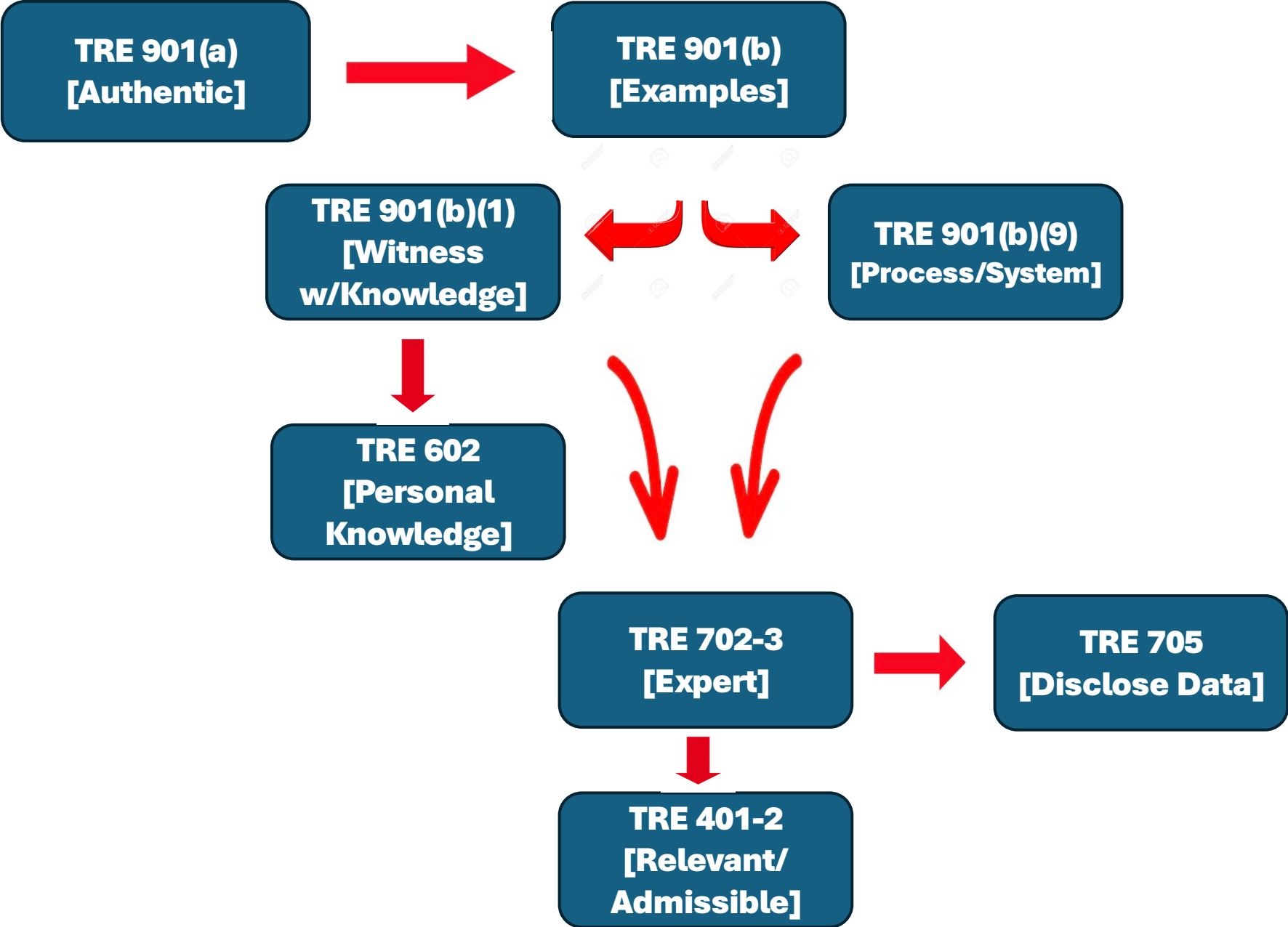


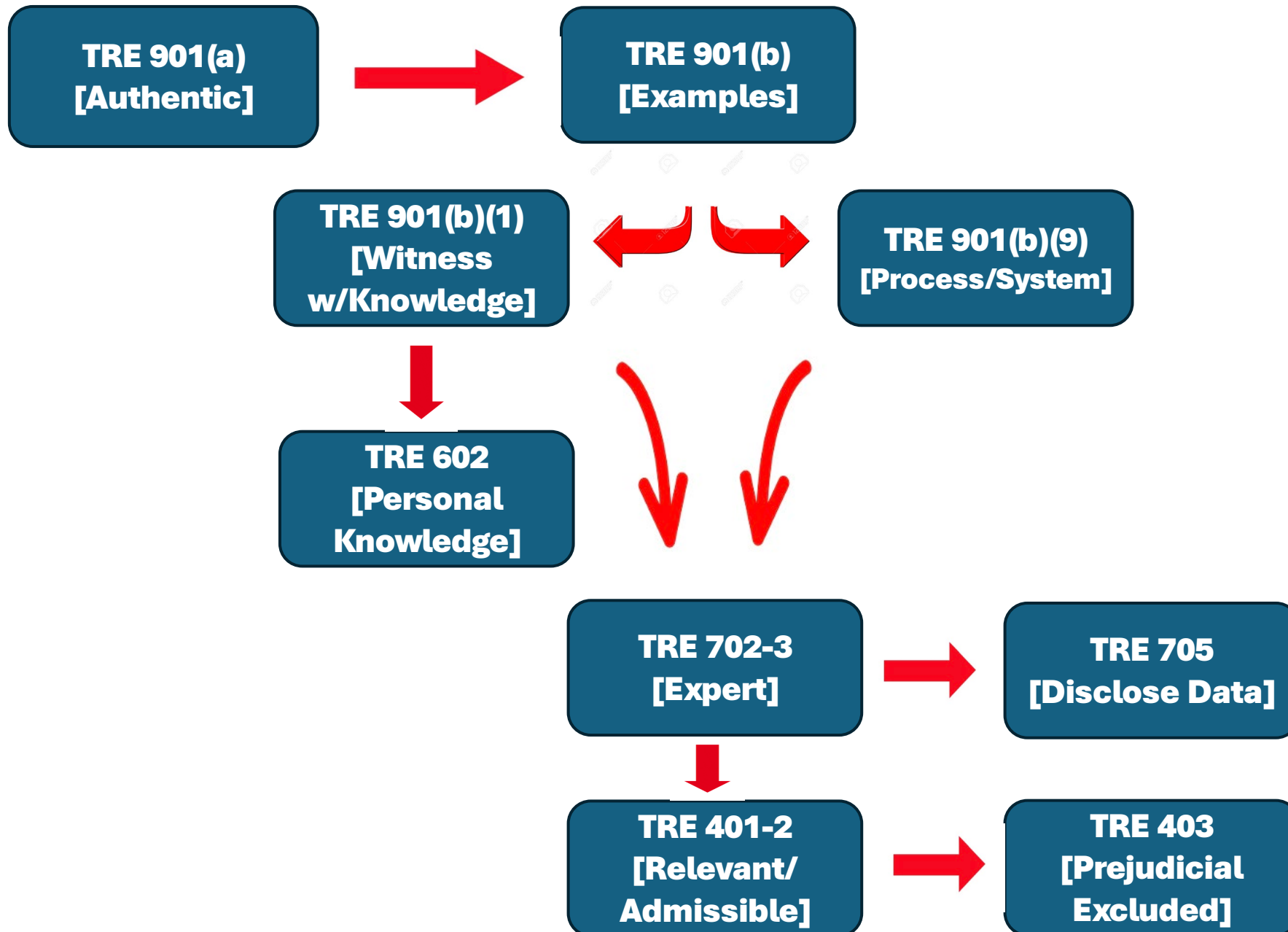


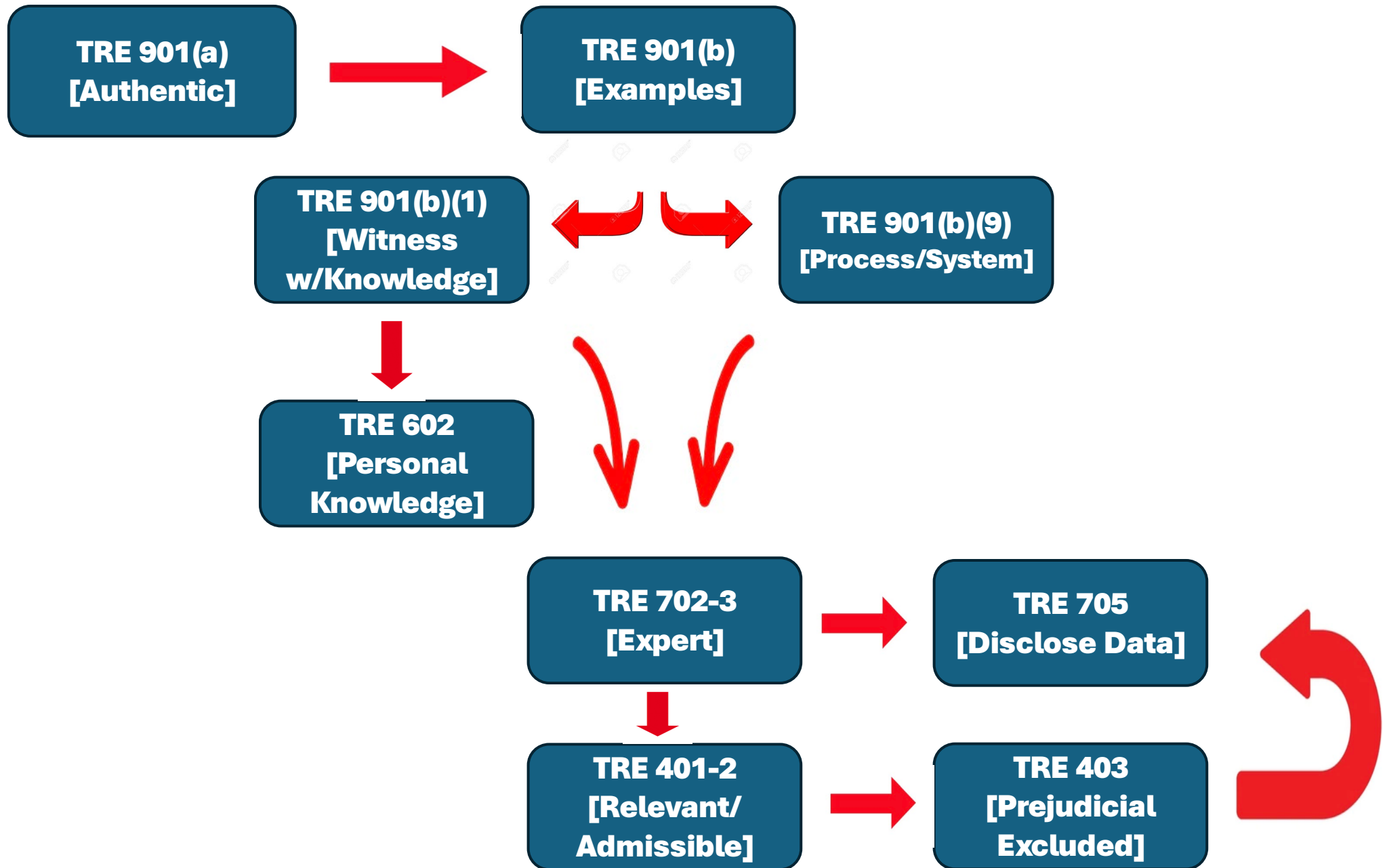












**TRE 901(a)**  
**[Authentic]**



**TRE 901(b)**  
**[Examples]**

**Proponent**

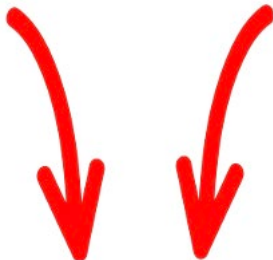
**TRE 901(b)(1)**  
**[Witness w/Knowledge]**



**TRE 901(b)(9)**  
**[Process/System]**



**TRE 602**  
**[Personal Knowledge]**



**TRE 702-3**  
**[Expert]**



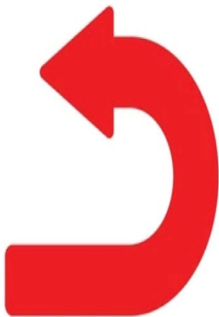
**TRE 705**  
**[Disclose Data]**



**TRE 401-2**  
**[Relevant/ Admissible]**



**TRE 403**  
**[Prejudicial Excluded]**



**It is what I  
say it is**

**TRE 901(a)  
[Authentic]**



**TRE 901(b)  
[Examples]**

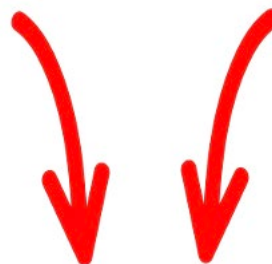
**Proponent**

**TRE 901(b)(1)  
[Witness  
w/Knowledge]**



**TRE 901(b)(9)  
[Process/System]**

**TRE 602  
[Personal  
Knowledge]**



**TRE 702-3  
[Expert]**

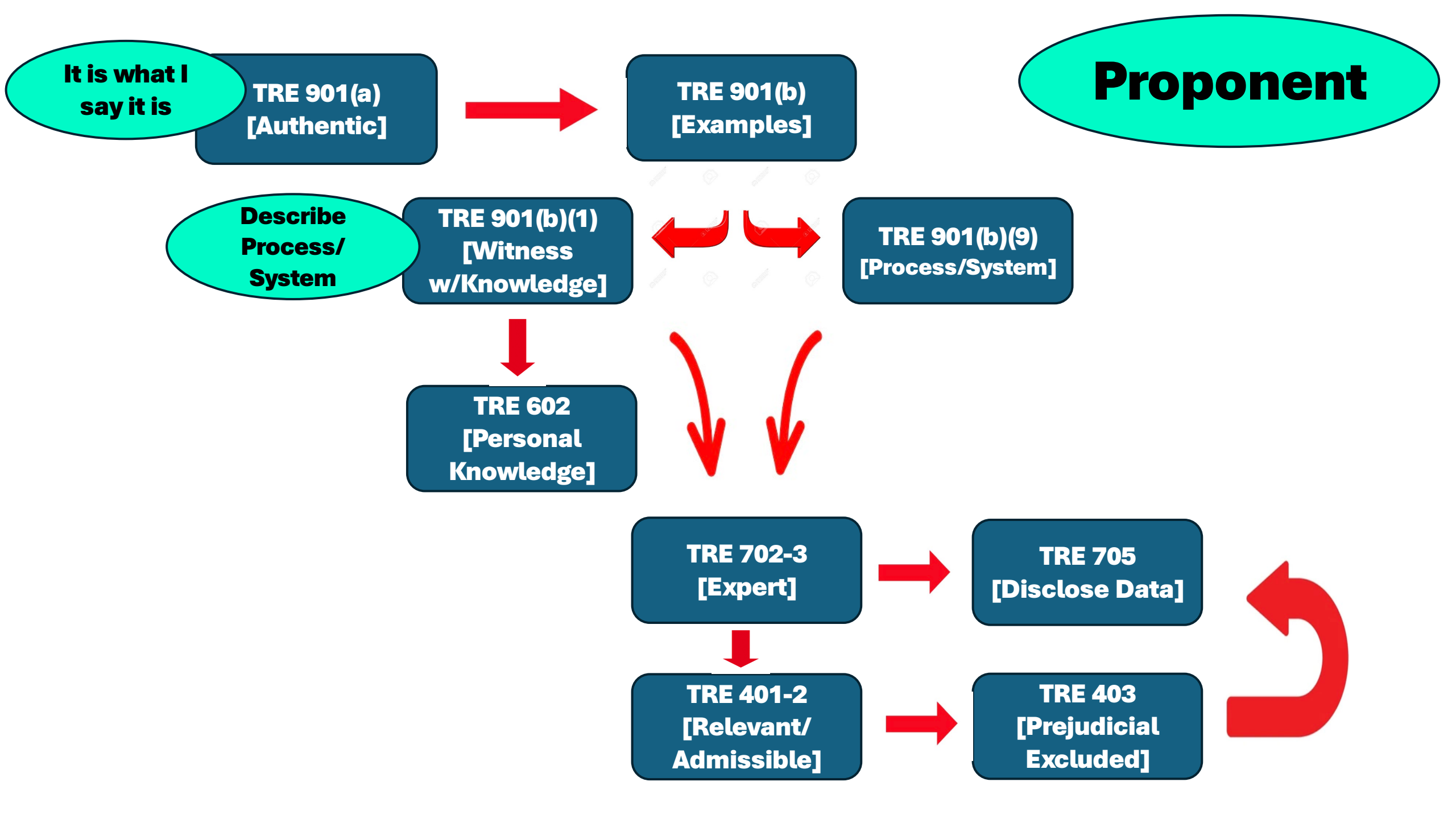
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[Disclose Data]**

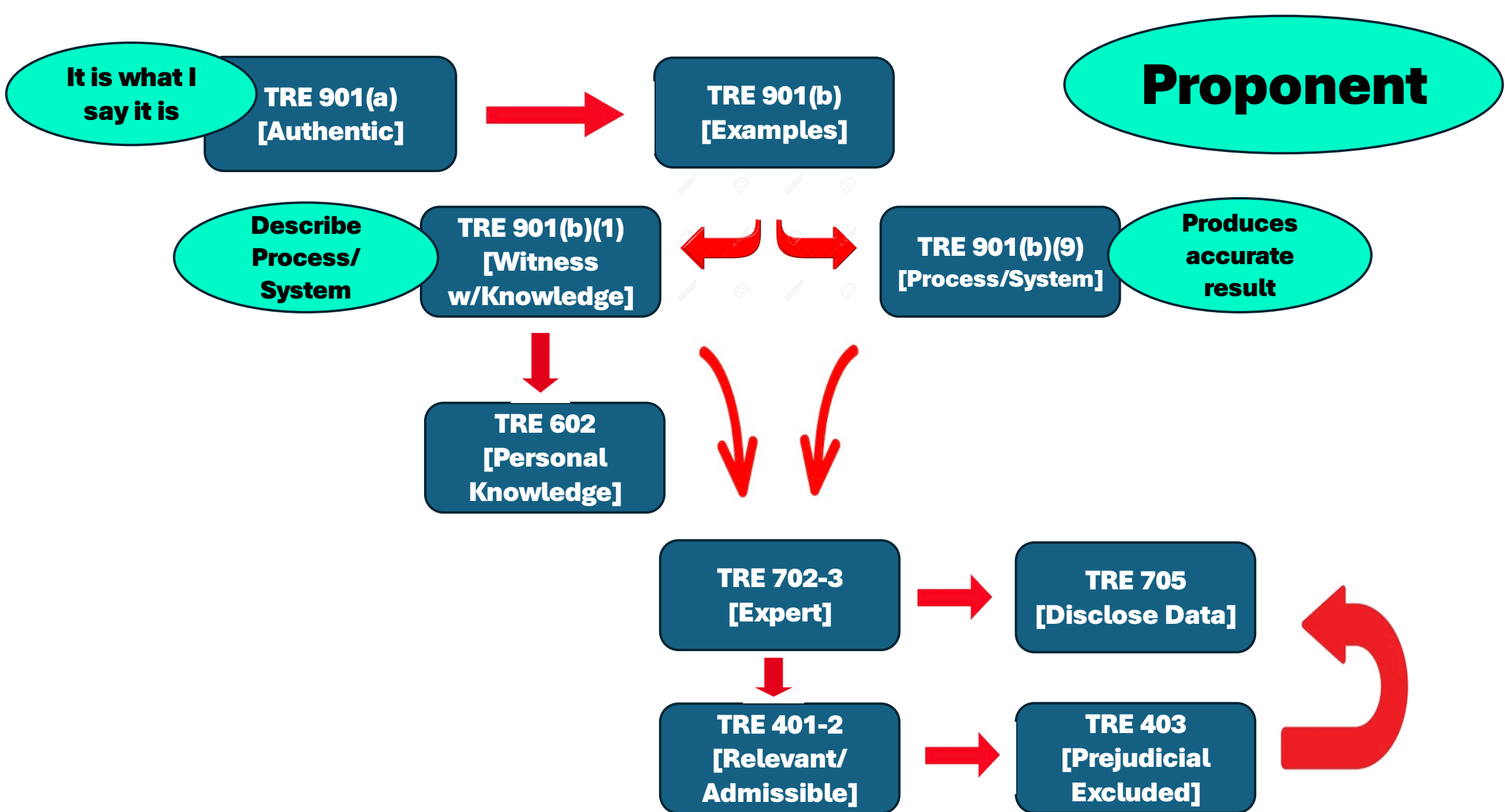
**TRE 401-2  
[Relevant/  
Admissible]**

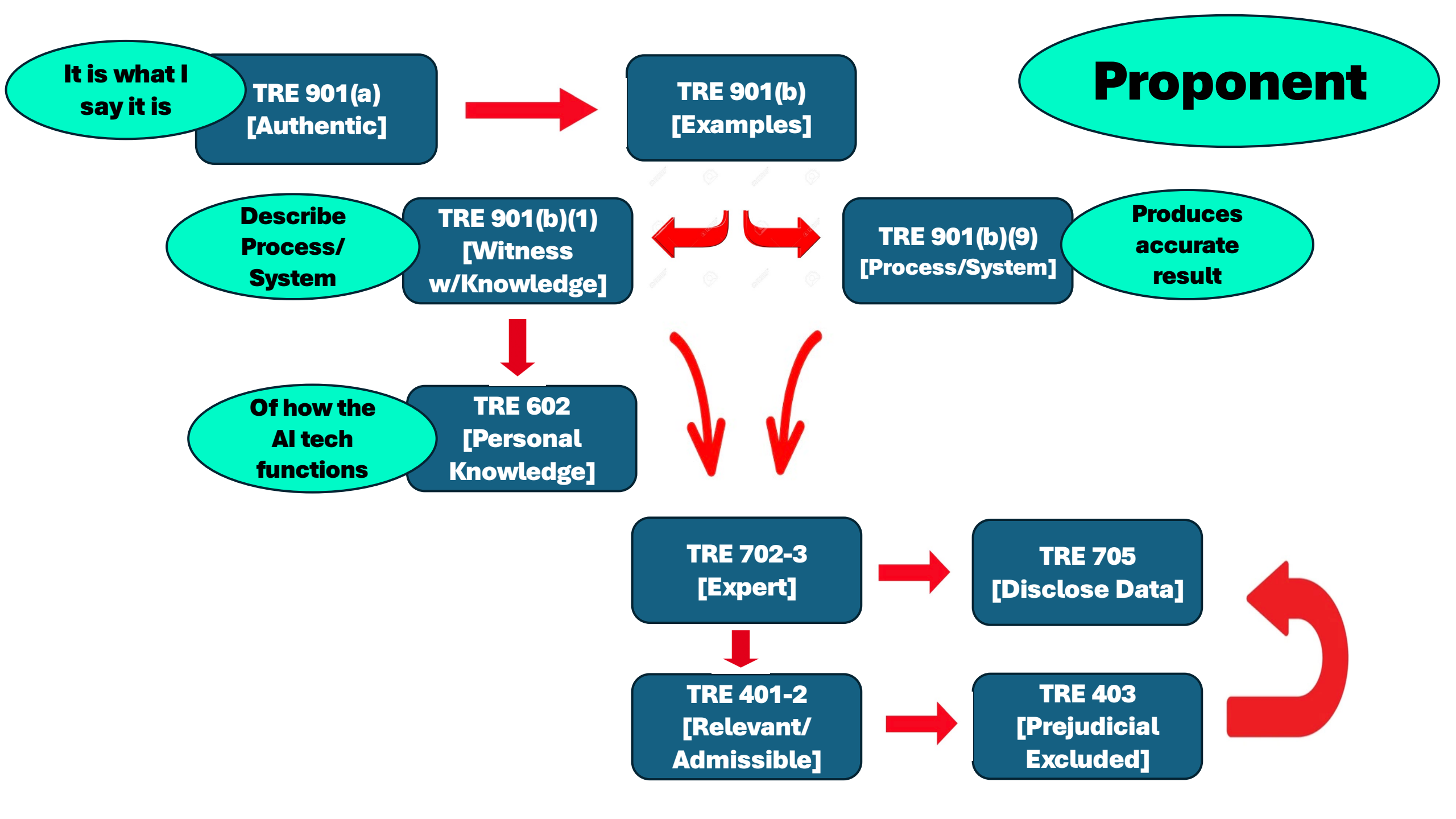


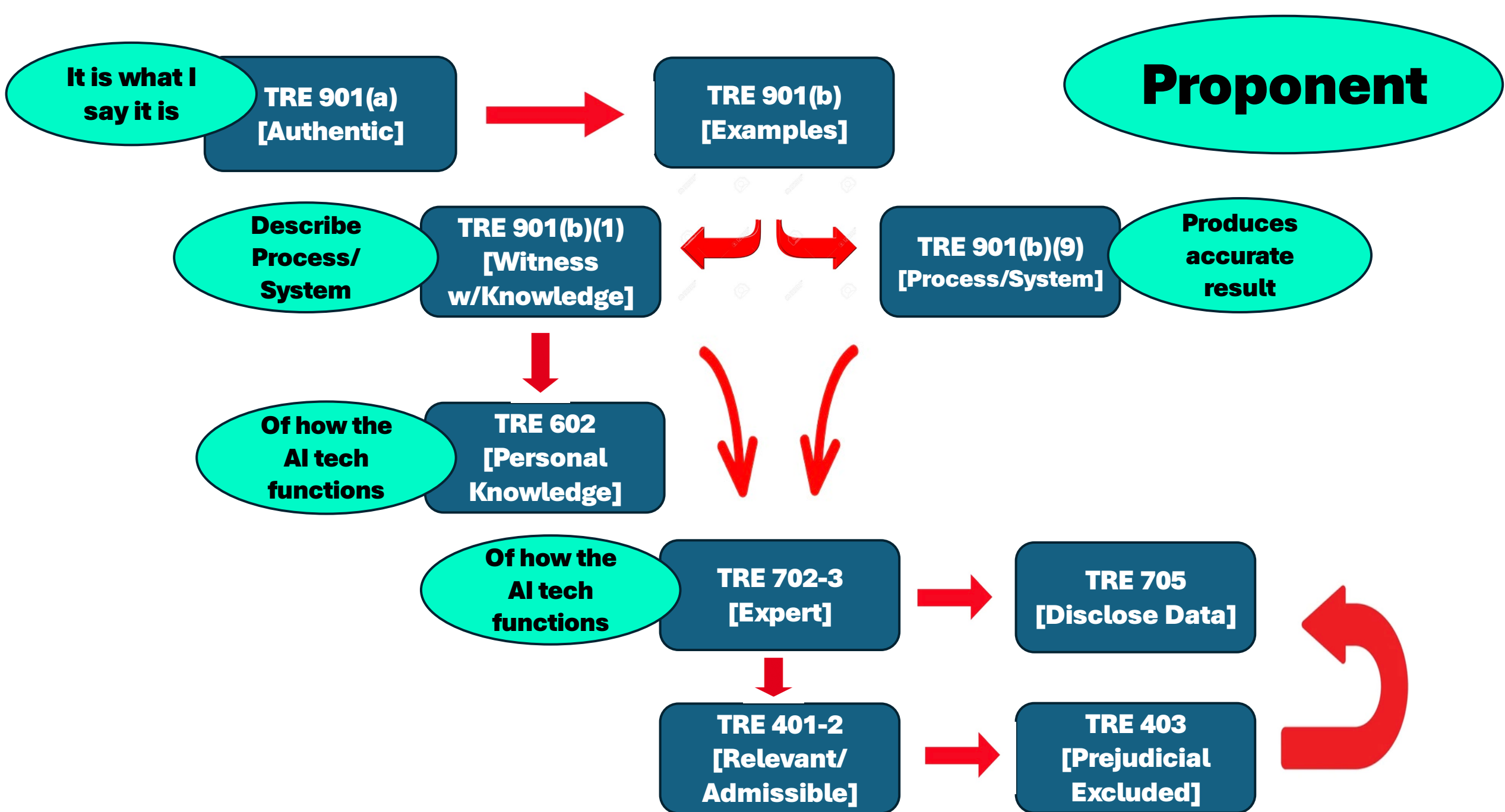
**TRE 403  
[Prejudicial  
Excluded]**

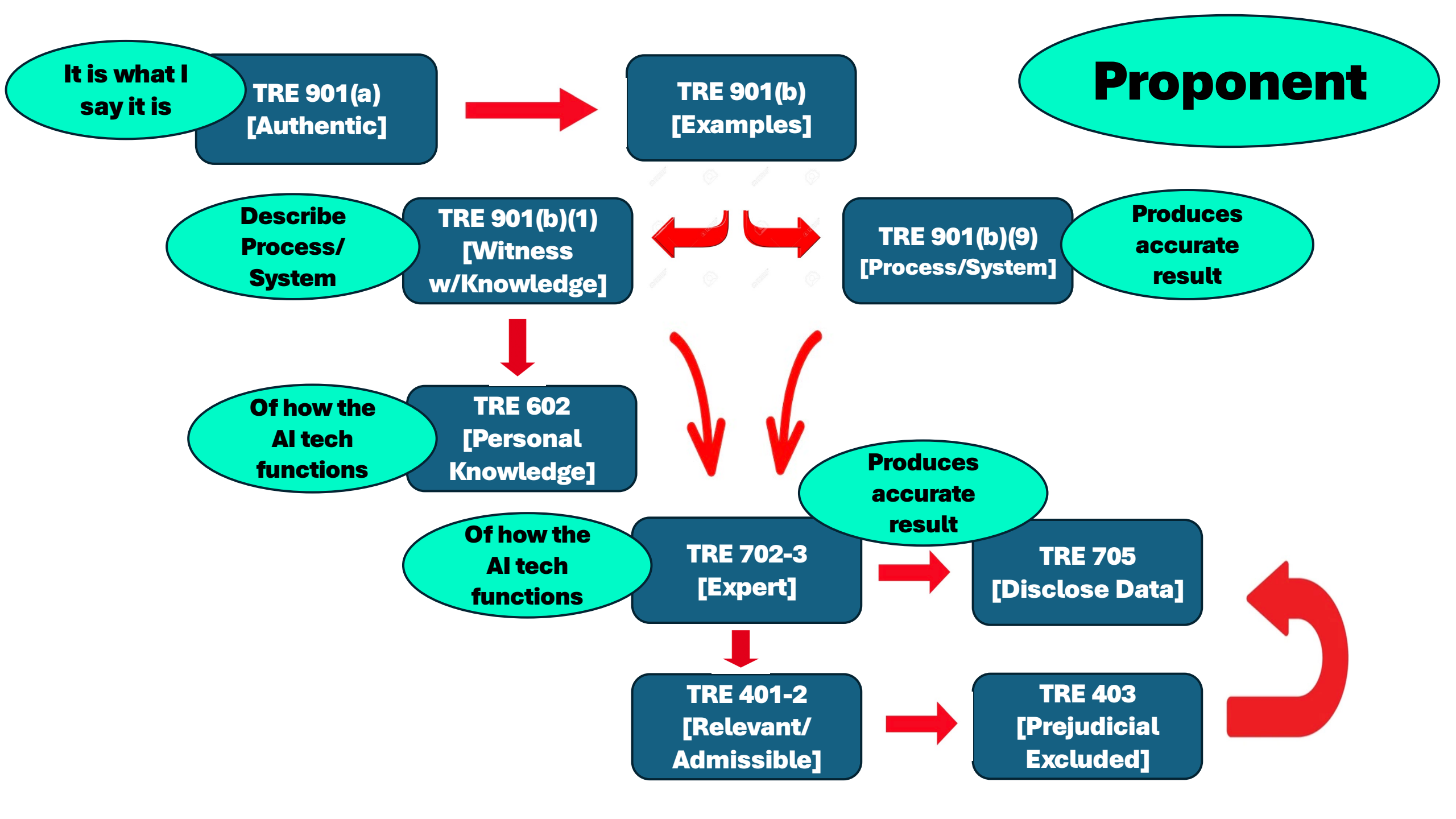


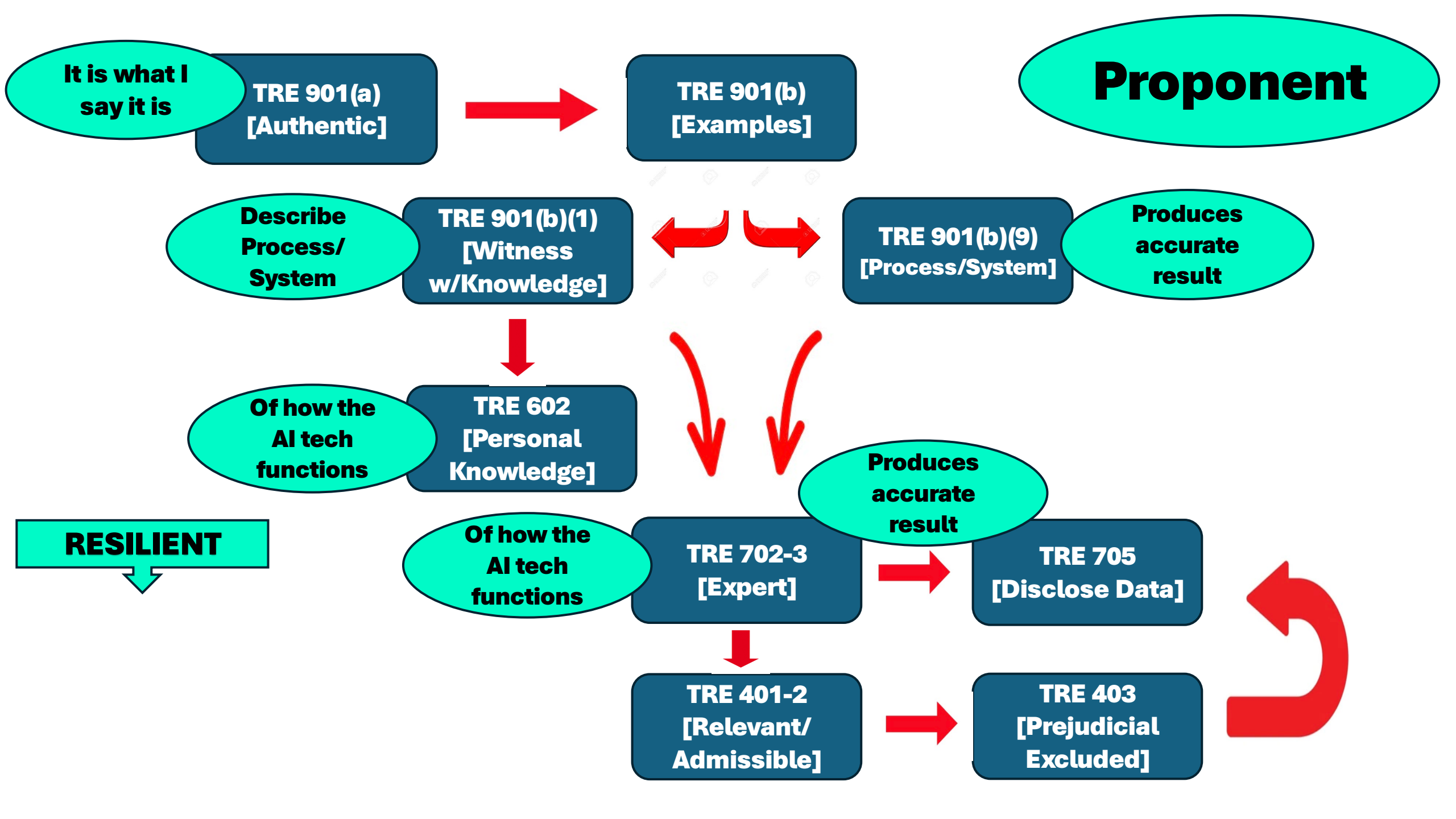


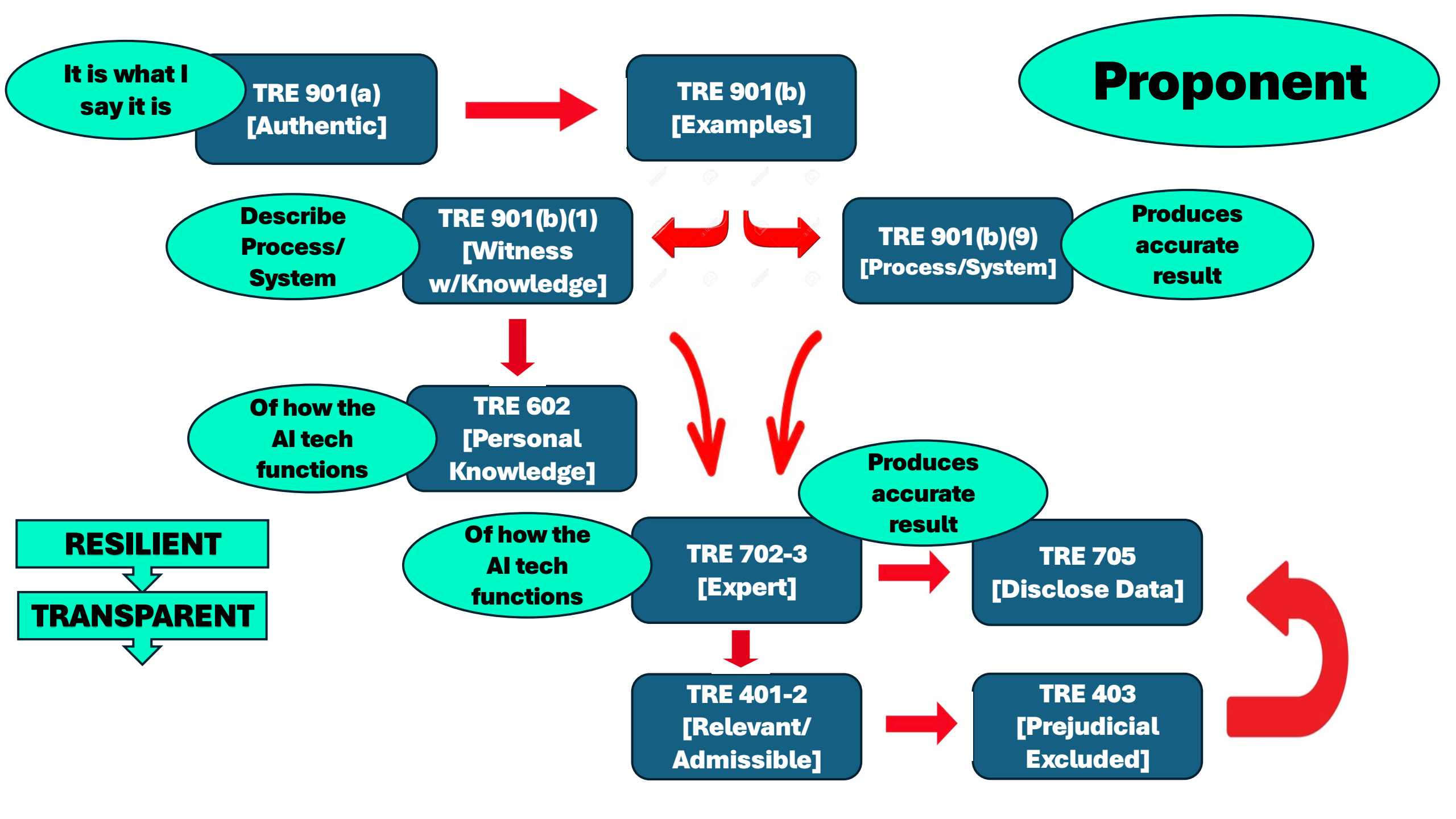


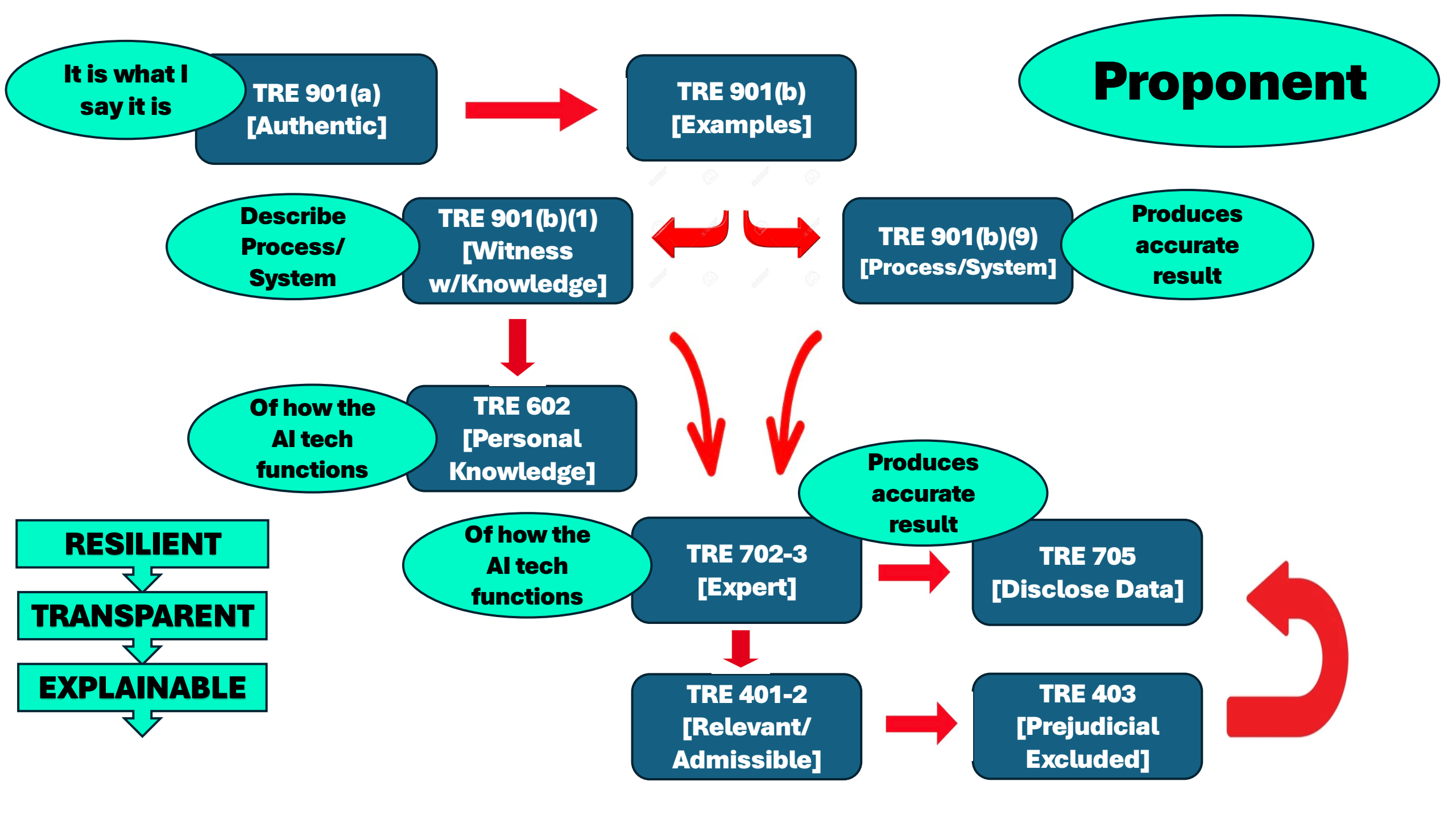


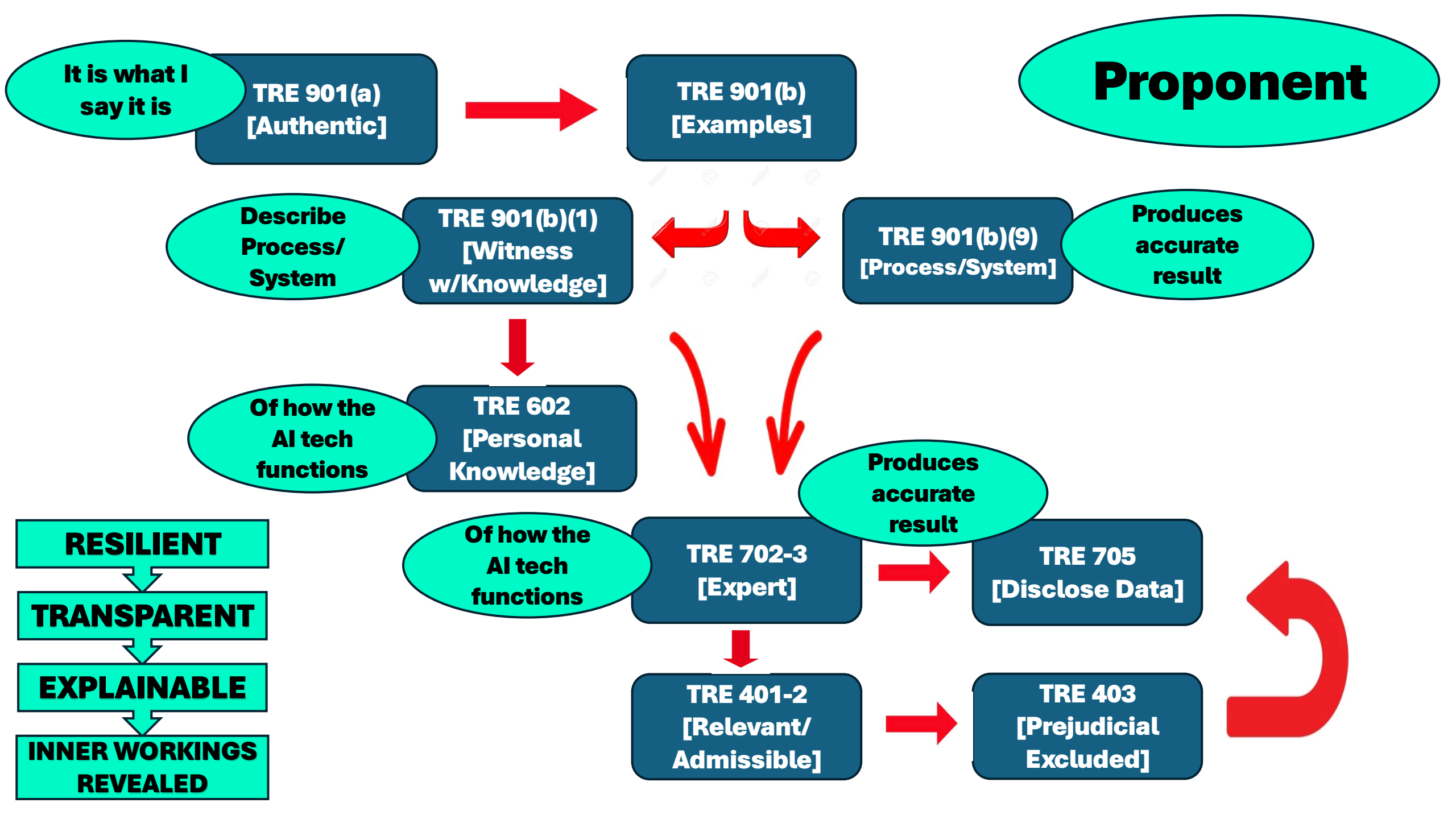












**TRE 901(a)**  
**[Authentic]**



**TRE 901(b)**  
**[Examples]**

**Opponent**

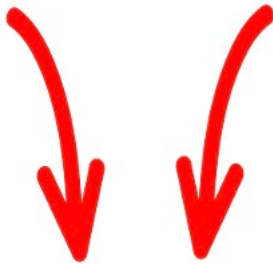
**TRE 901(b)(1)**  
**[Witness  
w/Knowledge]**



**TRE 901(b)(9)**  
**[Process/System]**



**TRE 602**  
**[Personal  
Knowledge]**



**TRE 702-3**  
**[Expert]**



**TRE 705**  
**[Disclose Data]**



**TRE 401-2**  
**[Relevant/  
Admissible]**



**TRE 403**  
**[Prejudicial  
Excluded]**



**It's not what they say it is**

**TRE 901(a)  
[Authentic]**



**TRE 901(b)  
[Examples]**

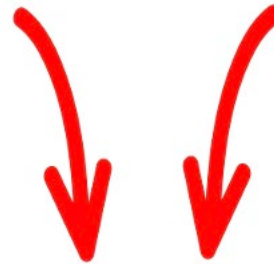
**Opponent**

**TRE 901(b)(1)  
[Witness  
w/Knowledge]**



**TRE 901(b)(9)  
[Process/System]**

**TRE 602  
[Personal  
Knowledge]**

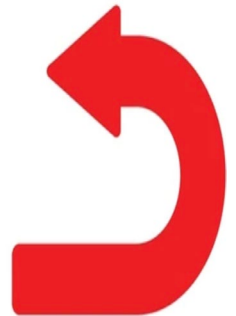


**TRE 702-3  
[Expert]**

**TRE 705  
[Disclose Data]**

**TRE 401-2  
[Relevant/  
Admissible]**

**TRE 403  
[Prejudicial  
Excluded]**



**It's not what they say it is**

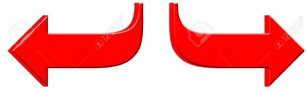
**TRE 901(a)  
[Authentic]**

**TRE 901(b)  
[Examples]**

**Opponent**

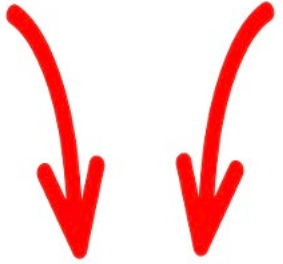
**Hallucination**

**TRE 901(b)(1)  
[Witness  
w/Knowledge]**



**TRE 901(b)(9)  
[Process/System]**

**TRE 602  
[Personal  
Knowledge]**

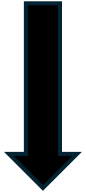
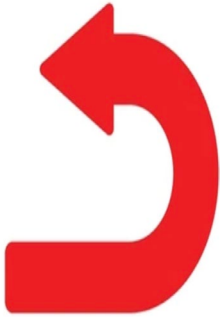


**TRE 702-3  
[Expert]**

**TRE 705  
[Disclose Data]**

**TRE 401-2  
[Relevant/  
Admissible]**

**TRE 403  
[Prejudicial  
Excluded]**



**It's not what they say it is**

**TRE 901(a)  
[Authentic]**

**TRE 901(b)  
[Examples]**

**Opponent**

**Hallucination**

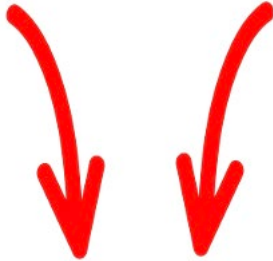
**Spoof**

**TRE 901(b)(1)  
[Witness  
w/Knowledge]**



**TRE 901(b)(9)  
[Process/System]**

**TRE 602  
[Personal  
Knowledge]**



**TRE 702-3  
[Expert]**

**TRE 705  
[Disclose Data]**

**TRE 401-2  
[Relevant/  
Admissible]**

**TRE 403  
[Prejudicial  
Excluded]**



**It's not what they say it is**

**TRE 901(a)  
[Authentic]**



**TRE 901(b)  
[Examples]**

**Opponent**

**Hallucination**

**Spoof**

**Self poisoned  
[Adversarial AI]**

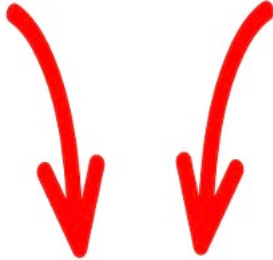
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[Witness  
w/Knowledge]**



**TRE 901(b)(9)  
[Process/System]**



**TRE 602  
[Personal  
Knowledge]**



**TRE 702-3  
[Expert]**



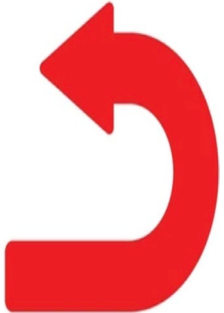
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[Disclose Data]**

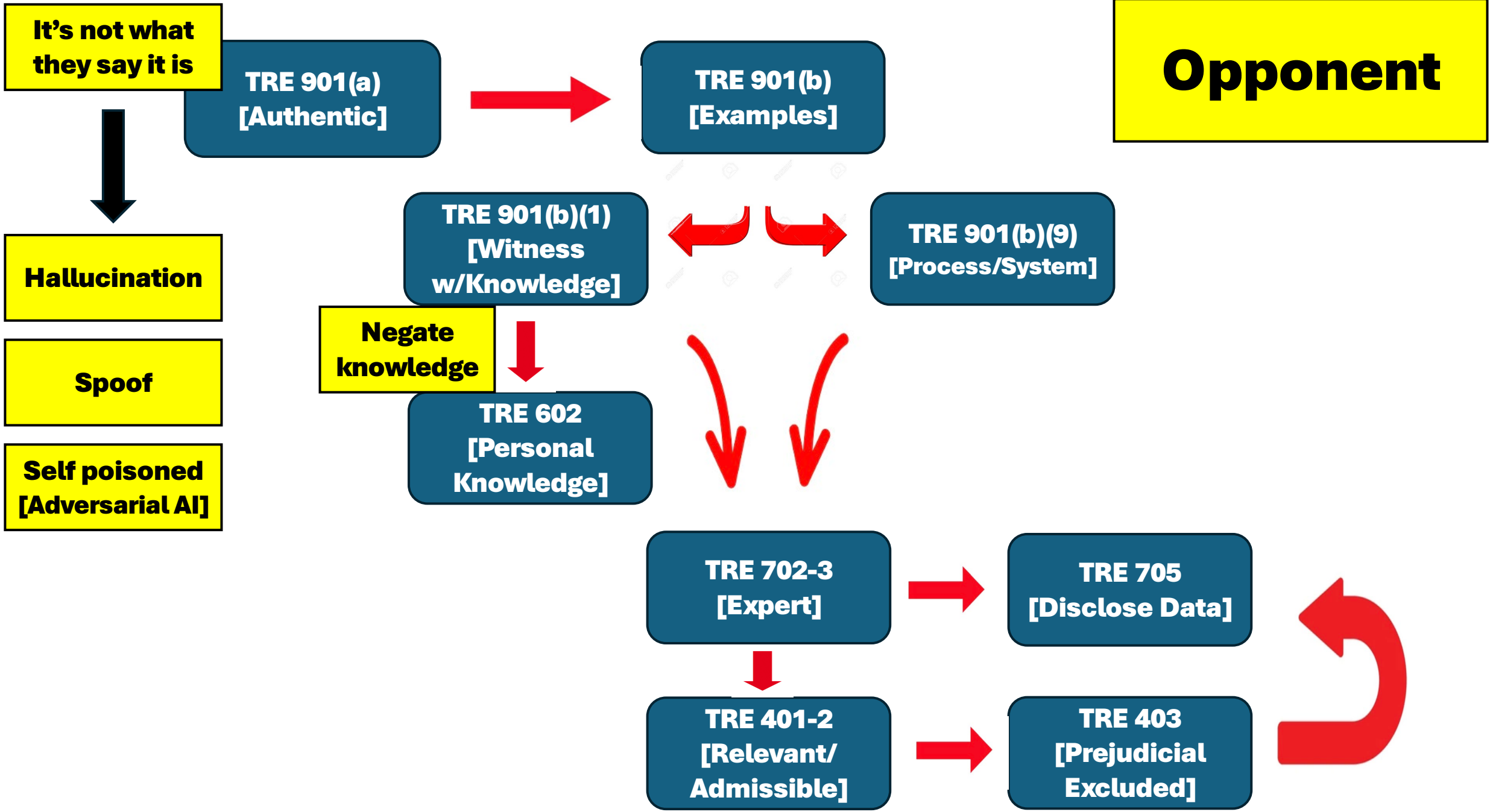


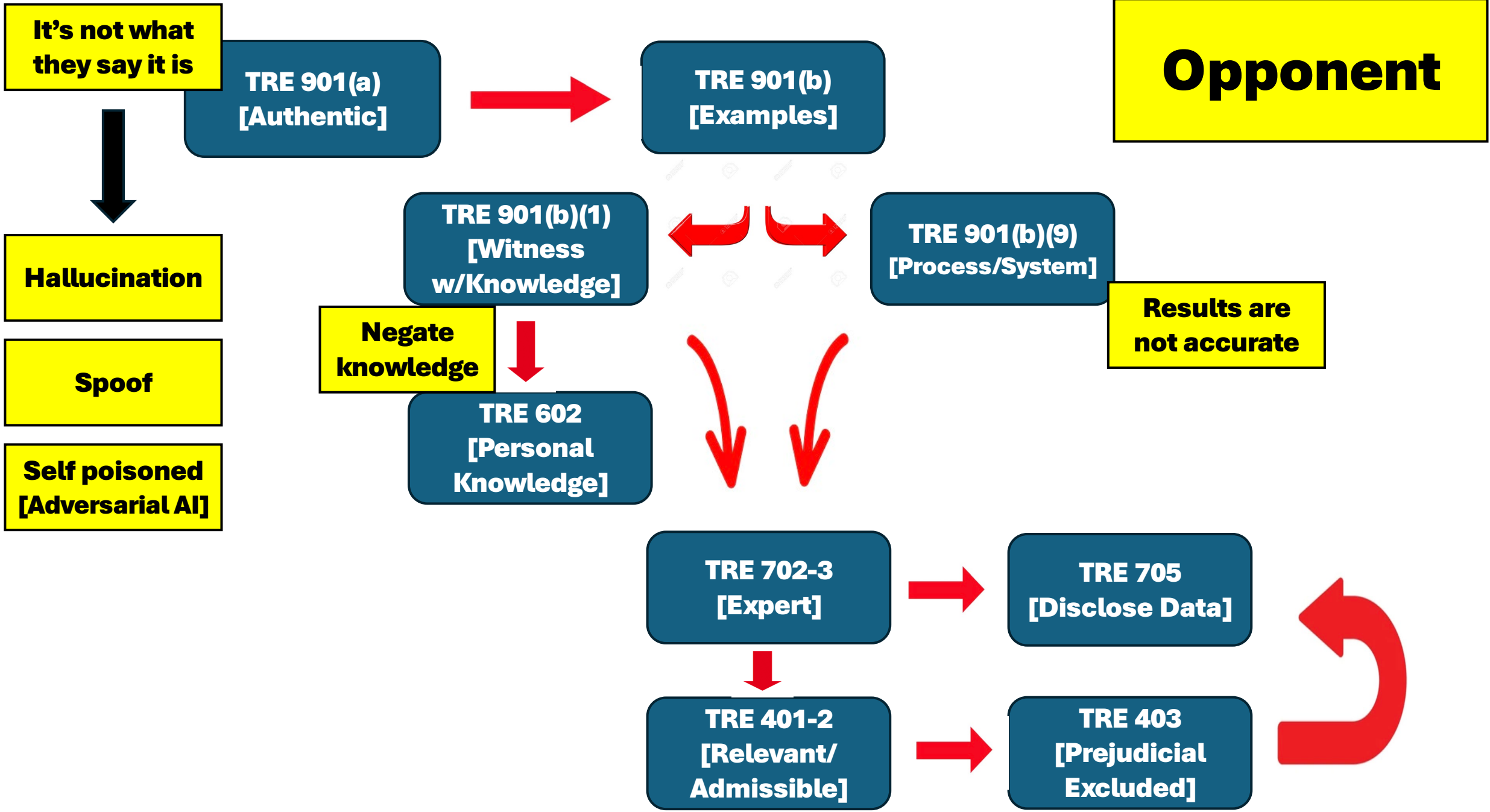
**TRE 401-2  
[Relevant/  
Admissible]**

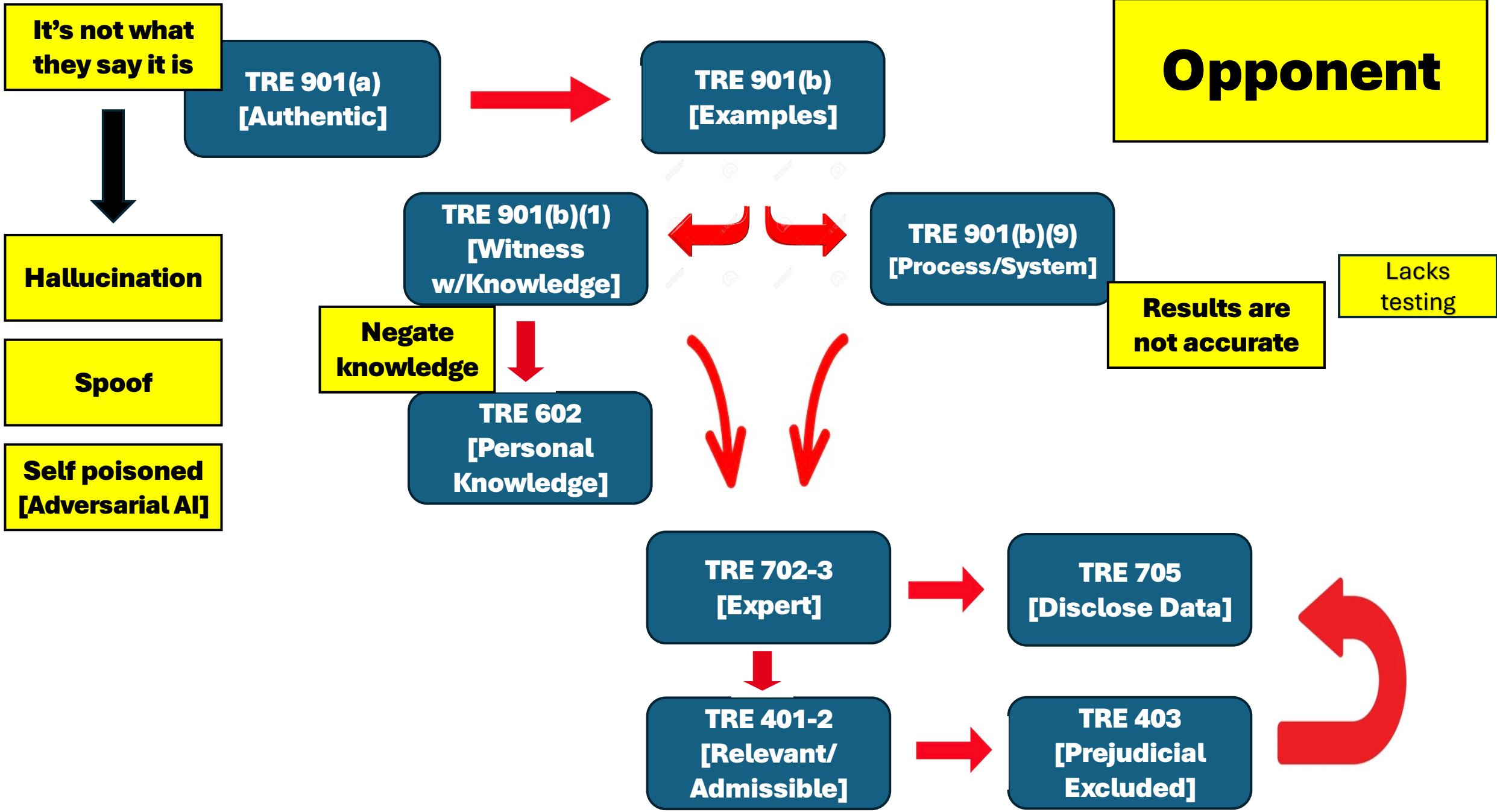


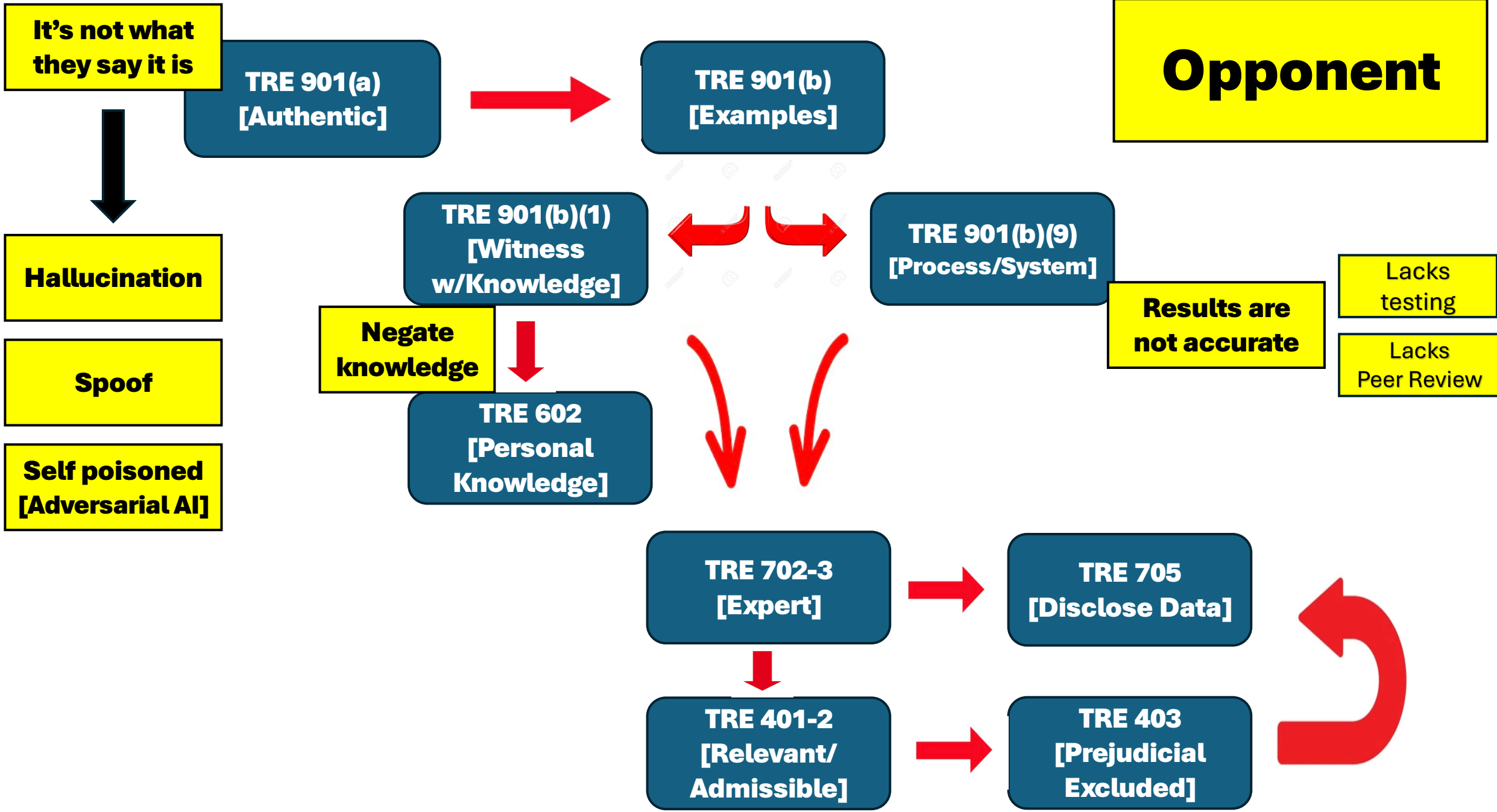
**TRE 403  
[Prejudicial  
Excluded]**

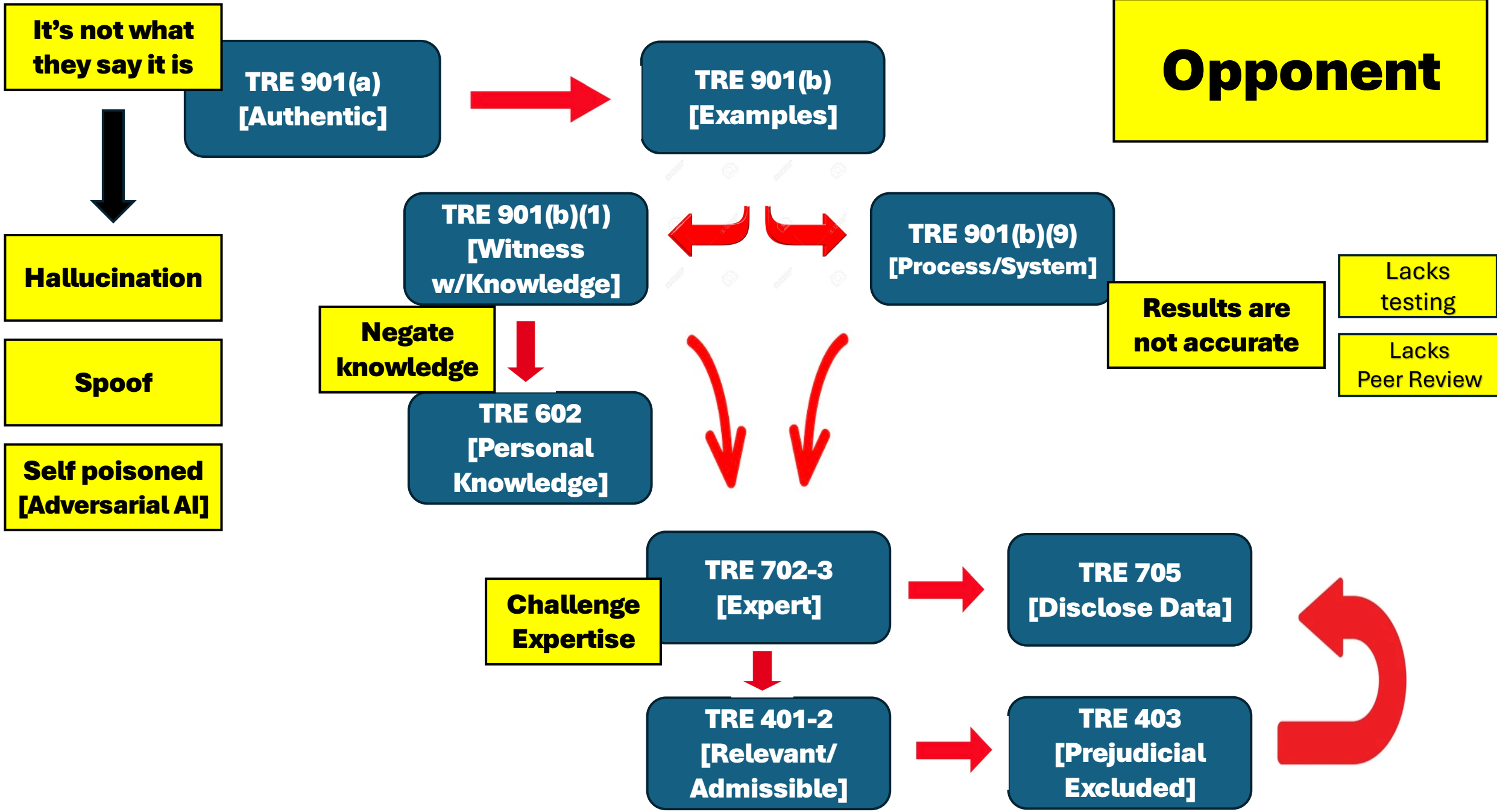


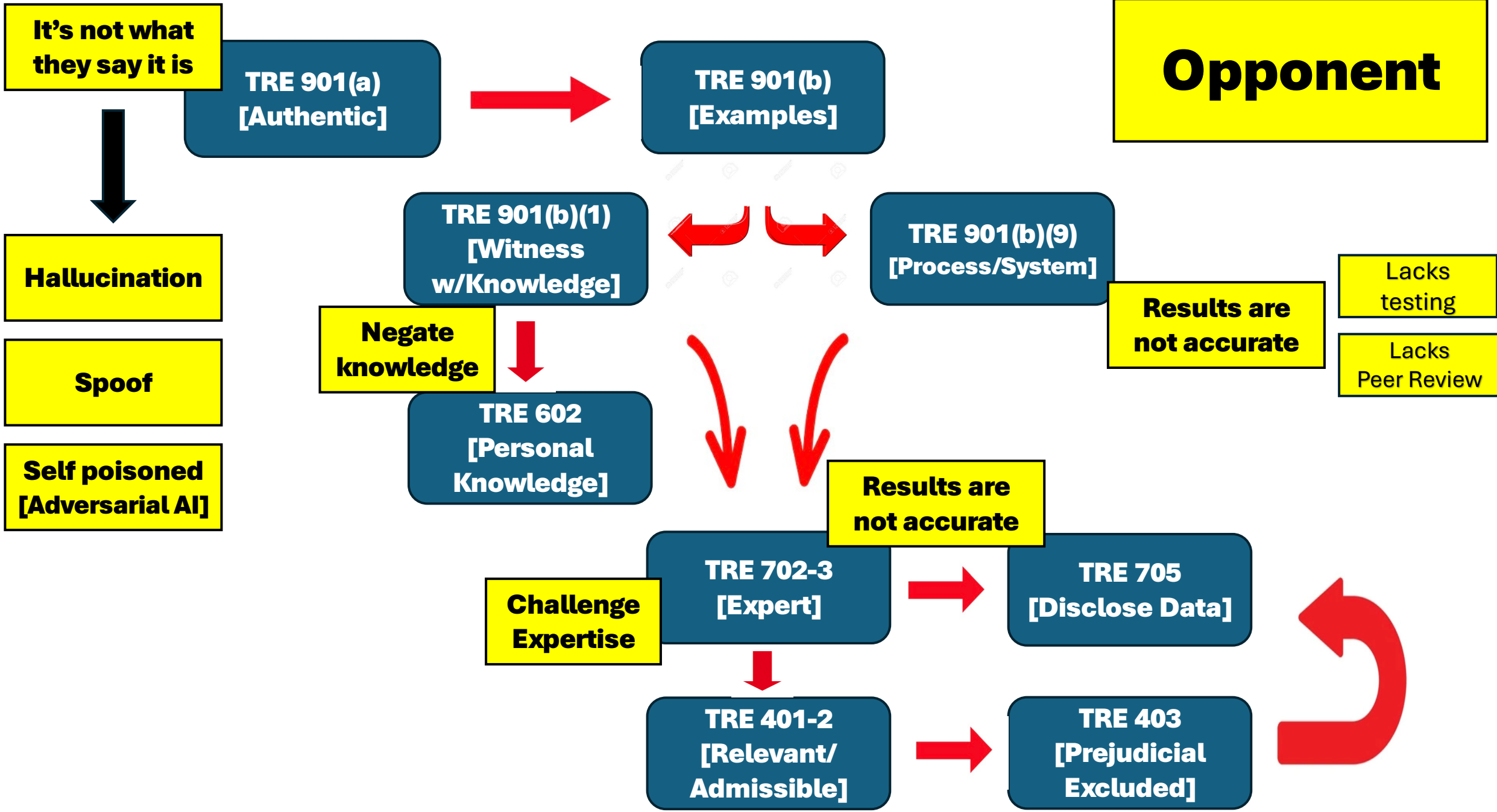


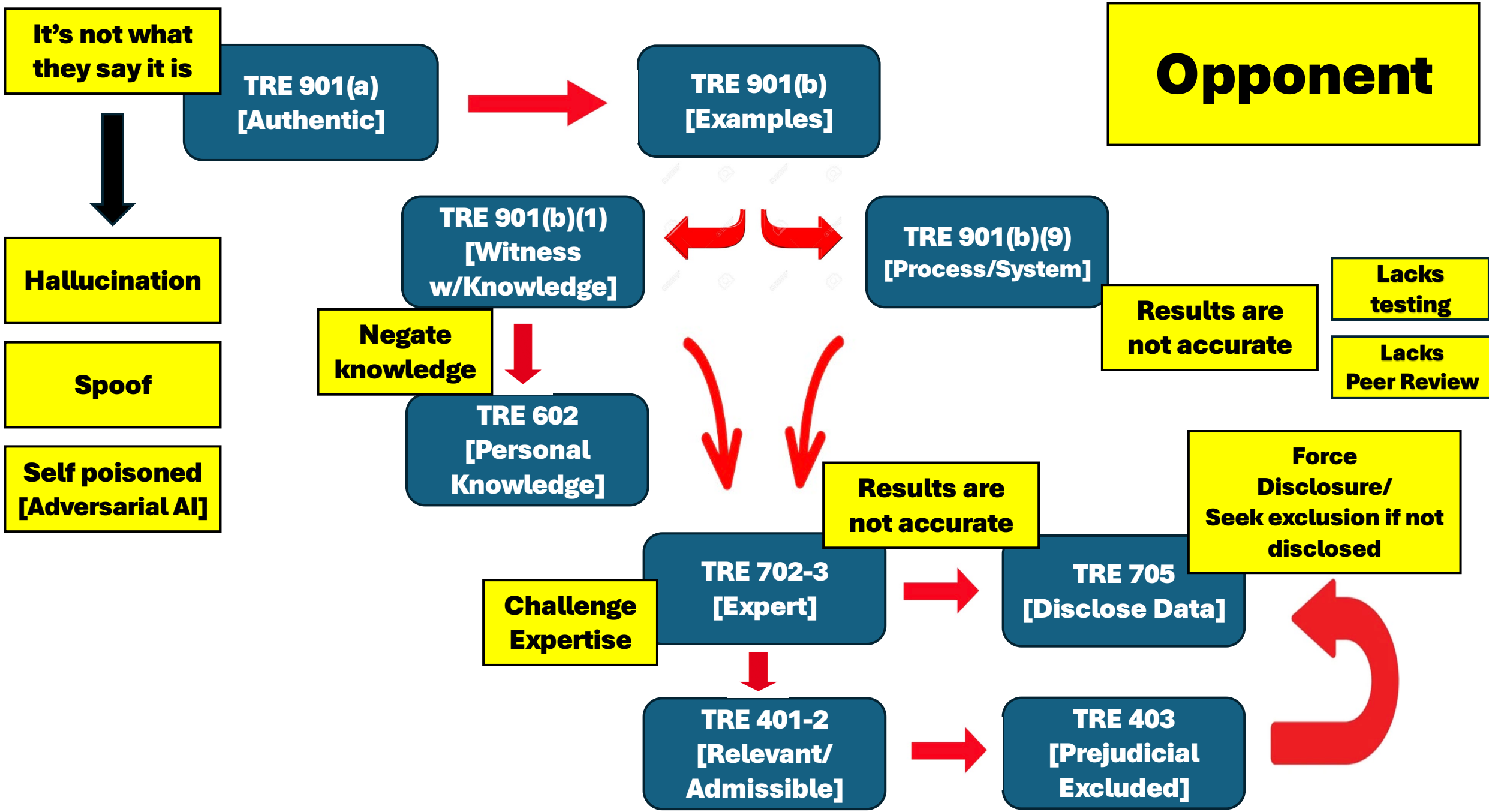












**It's not what they say it is**

**TRE 901(a)  
[Authentic]**

**TRE 901(b)  
[Examples]**

**Opponent**

**Hallucination**

**Spoof**

**Self poisoned  
[Adversarial AI]**

**TRE 901(b)(1)  
[Witness  
w/Knowledge]**

**TRE 901(b)(9)  
[Process/System]**

**Negate  
knowledge**

**Results are  
not accurate**

**Lacks  
testing**

**Lacks  
Peer Review**

**TRE 602  
[Personal  
Knowledge]**

**Results are  
not accurate**

**Force  
Disclosure/  
Seek exclusion if not  
disclosed**

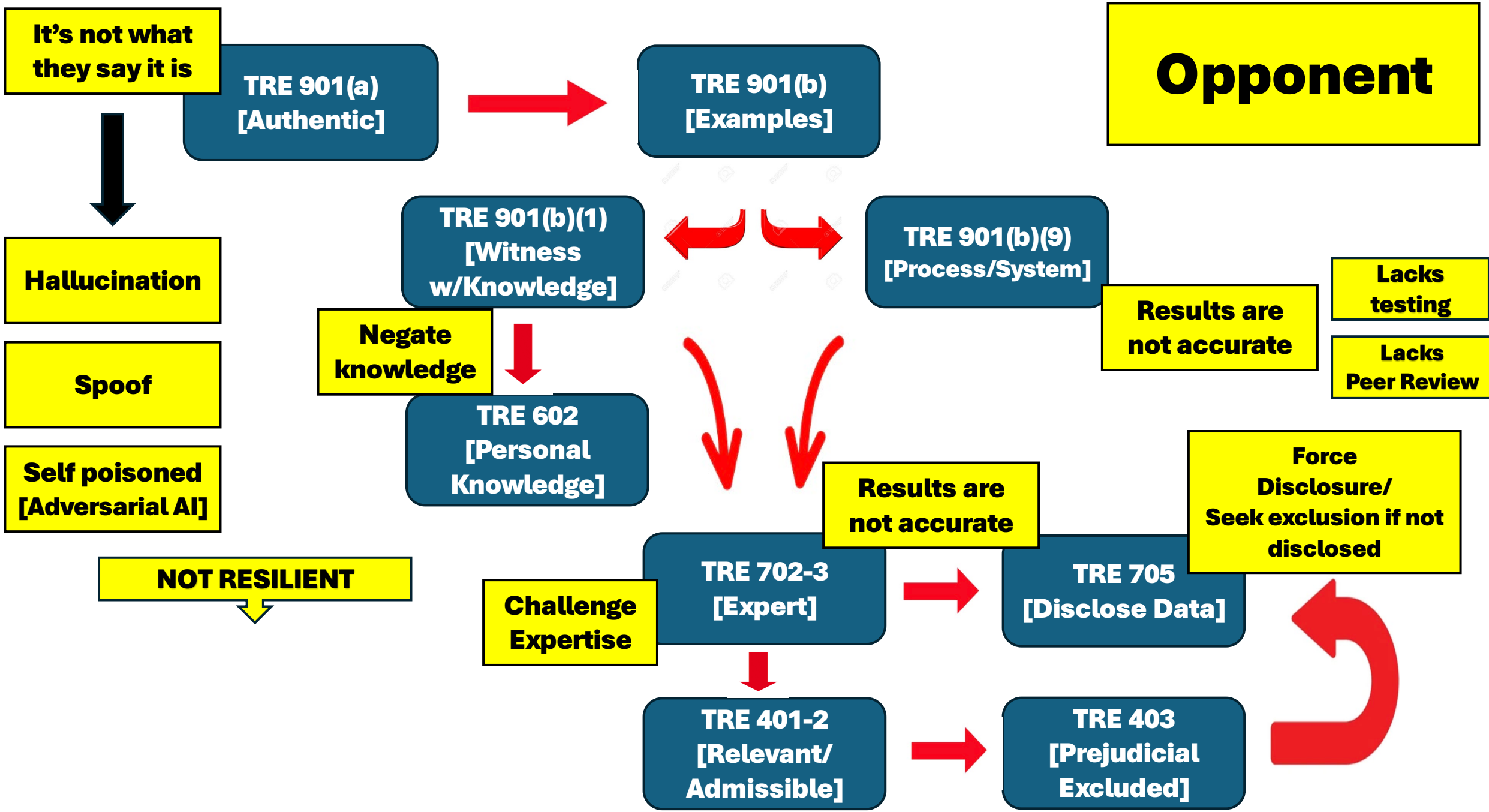
**Challenge  
Expertise**

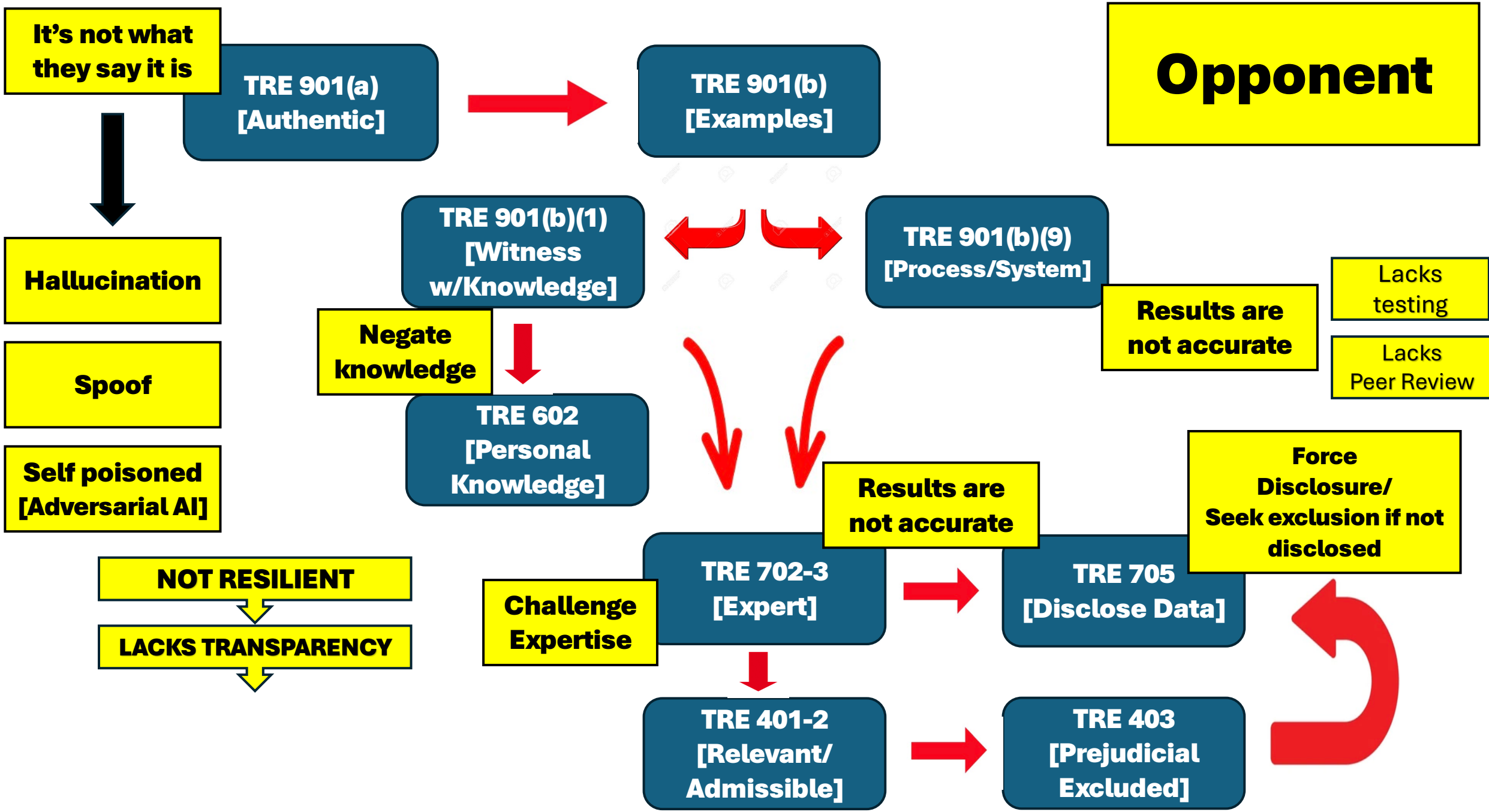
**TRE 702-3  
[Expert]**

**TRE 705  
[Disclose Data]**

**TRE 401-2  
[Relevant/  
Admissible]**

**TRE 403  
[Prejudicial  
Excluded]**





It's not what they say it is

TRE 901(a)  
[Authentic]



TRE 901(b)  
[Examples]

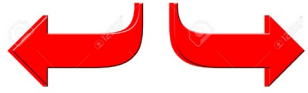
Opponent

Hallucination

Spooof

Self poisoned  
[Adversarial AI]

TRE 901(b)(1)  
[Witness  
w/Knowledge]

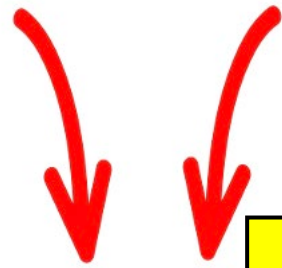


TRE 901(b)(9)  
[Process/System]

Negate  
knowledge



TRE 602  
[Personal  
Knowledge]



Results are  
not accurate

Lacks  
testing

Lacks  
Peer Review

Results are  
not accurate

Force  
Disclosure/  
Seek exclusion if not  
disclosed

NOT RESILIENT

LACKS TRANSPARENCY

Challenge  
Expertise

TRE 702-3  
[Expert]



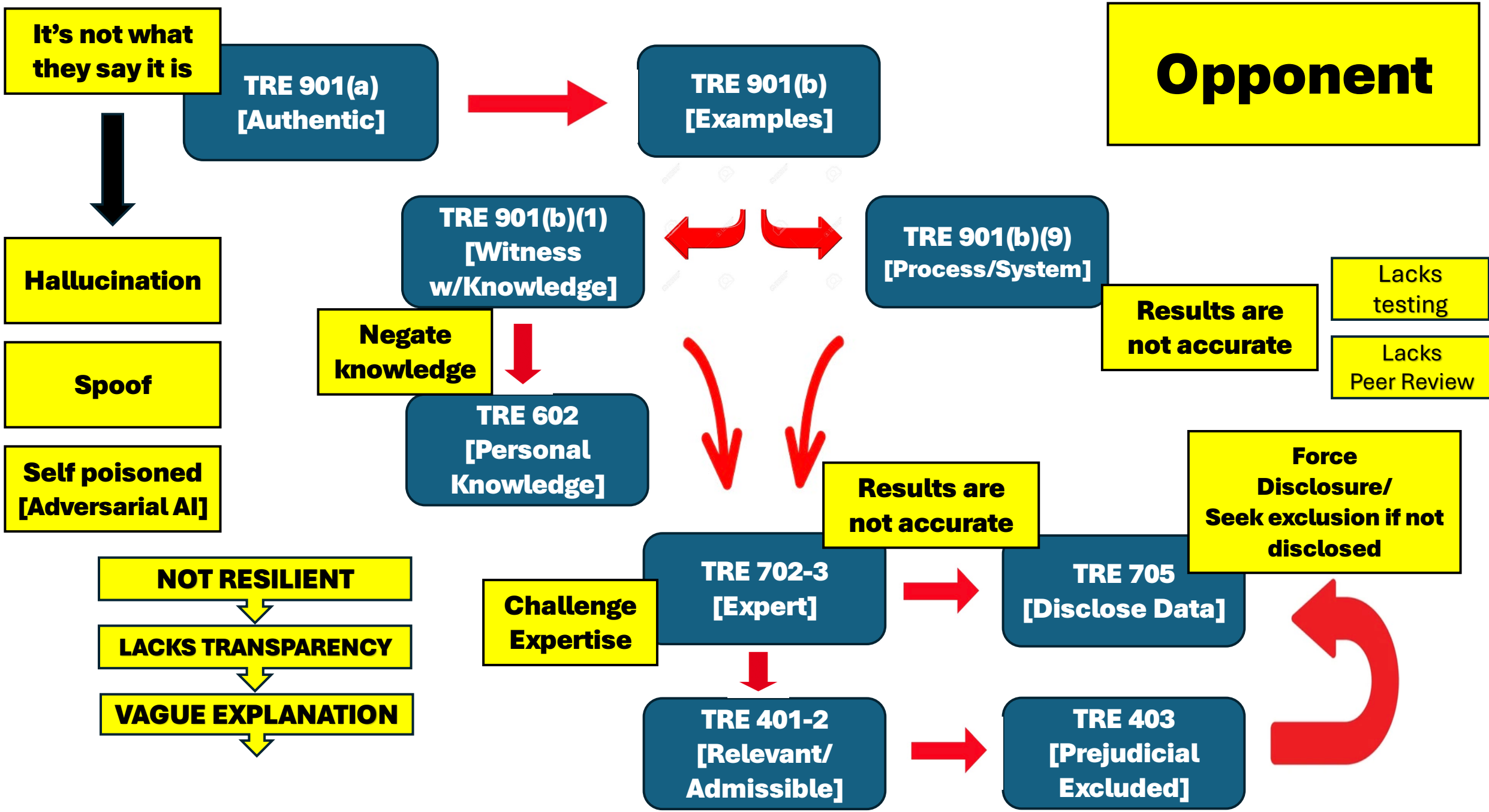
TRE 705  
[Disclose Data]

TRE 401-2  
[Relevant/  
Admissible]



TRE 403  
[Prejudicial  
Excluded]





It's not what they say it is

TRE 901(a)  
[Authentic]

TRE 901(b)  
[Examples]

Opponent

Hallucination

TRE 901(b)(1)  
[Witness  
w/Knowledge]

TRE 901(b)(9)  
[Process/System]

Lacks testing

Negate knowledge

Results are not accurate

Lacks Peer Review

Spooof

TRE 602  
[Personal Knowledge]

Results are not accurate

Force Disclosure/  
Seek exclusion if not disclosed

Self poisoned  
[Adversarial AI]

NOT RESILIENT

TRE 702-3  
[Expert]

TRE 705  
[Disclose Data]

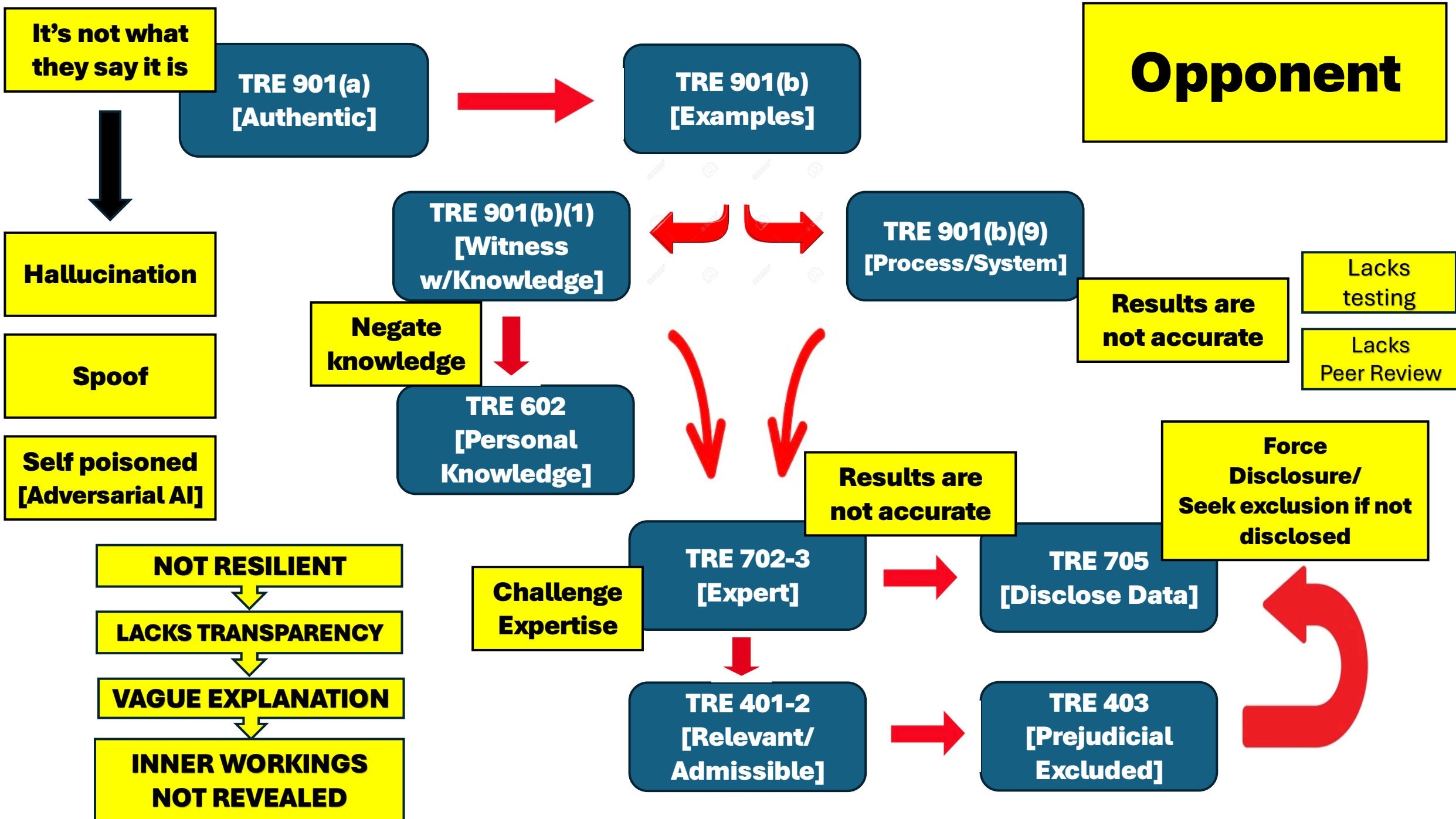
Challenge Expertise

LACKS TRANSPARENCY

TRE 401-2  
[Relevant/  
Admissible]

TRE 403  
[Prejudicial  
Excluded]

VAGUE EXPLANATION



**intel**

## FakeCatcher

the world's first real-time deepfake detector

Pioneered by Intel, the FakeCatcher deepfake detector analyzes "blood flow" in video pixels to determine a video's authenticity in milliseconds.

**What is a deepfake?**  
Deepfakes are synthetic videos, images, or audio clips where the actor or the action of the actor is not real.

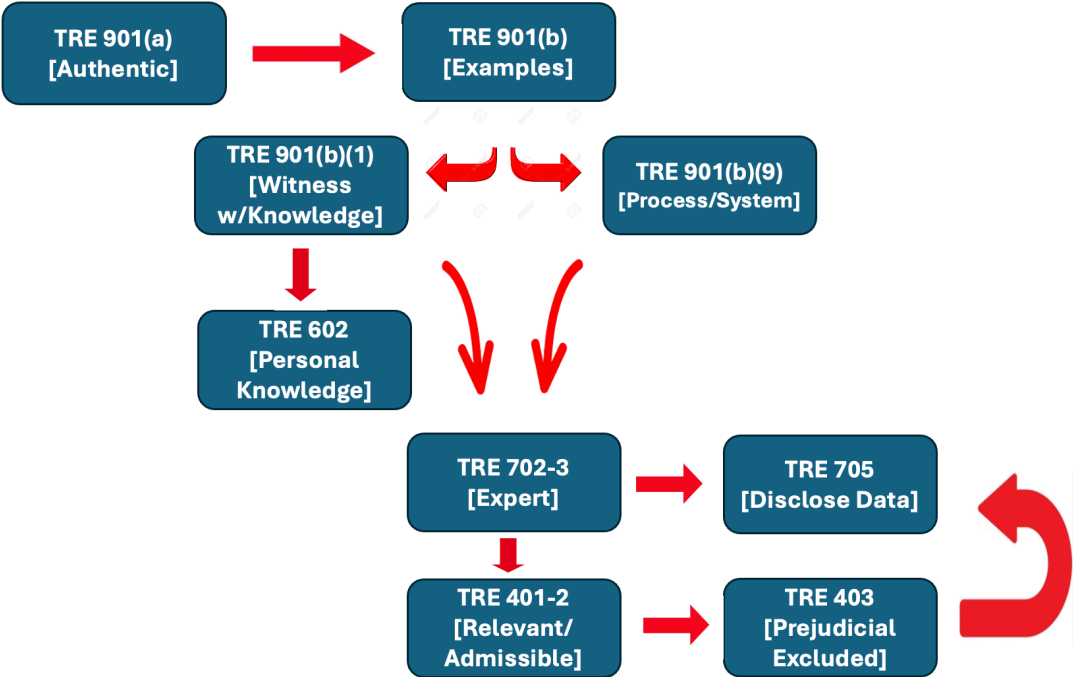
FakeCatcher can run up to **72 concurrent** real-time deepfake detection streams on 3rd Gen Intel® Xeon® Scalable processors

**96%** FakeCatcher's accuracy for deepfake detection

**FakeCatcher is the first deepfake detection algorithm that uses heart rates.**

**How could FakeCatcher be used?**

- Content Creation Tools**  
Integrated detection in editing software used by content creators and broadcasters.
- Social Media**  
Detection as part of a screening process on user-generated content.
- Media & Broadcasters**  
Detection in news video footage, particularly background (b-roll) sourced from third parties.
- AI for Social Good**  
Democratized deepfake detection via a common platform, enabling any person or entity to confirm the authenticity of a video.



**Presentation & PPT**  
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*Thank you  
for Listening!*