

# A Comprehensive Model for Specific Learning Disability Evaluations



**Using the *Building Blocks Brain Model of  
Development to Understand and Assess Learning  
Disabilities***

Peter Thompson, Ed.S., Ph.D.

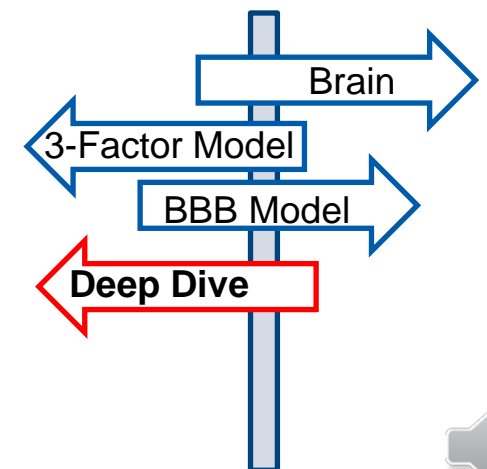




# Module 2.3 Guidepost 4

The Building Blocks Brain Model

**A DEEPER DIVE: Processing Speed**



# Important Note

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The information, concepts, and models provided in this presentation are intended to give practitioners a framework when conducting special education evaluations. It is emphasized that nothing in this presentation is meant to be directive or prescriptive. Professionals are free to use some, or all of the information presented, but they are not required to do so in their practice. **Always consult with your special education director for clarity around district policies and expectations for special education evaluations.**



**IMPORTANT** 

# Learning Outcomes

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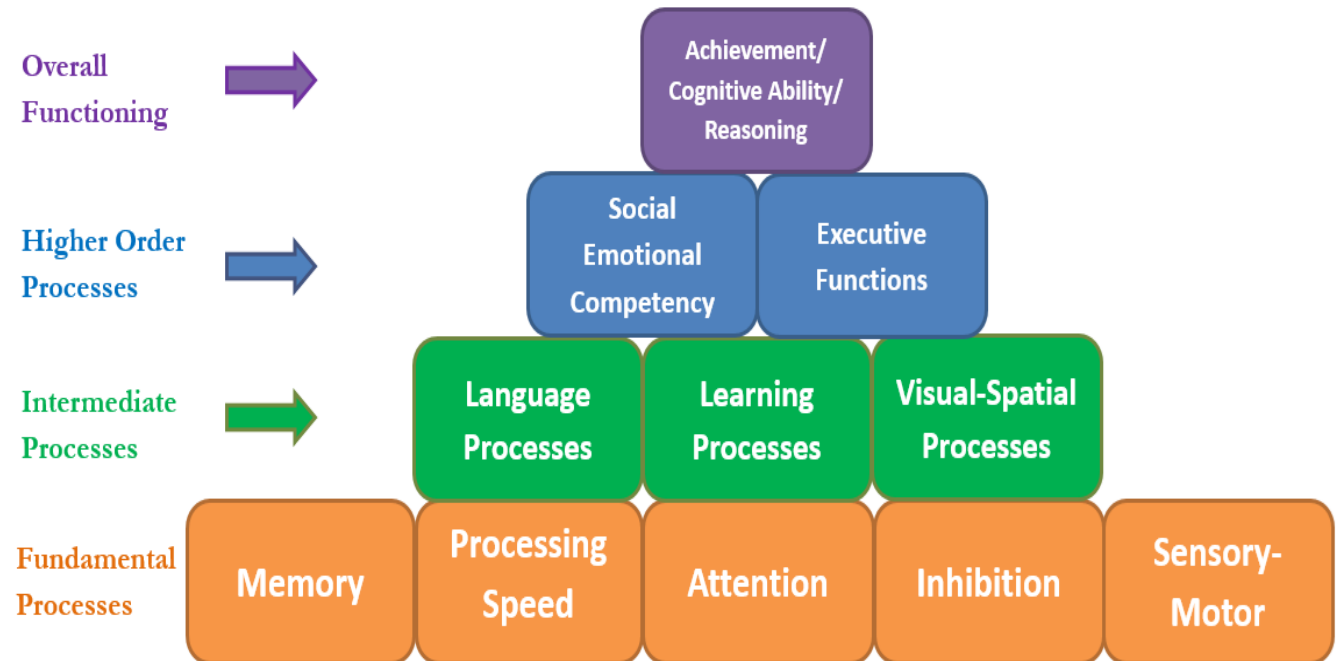
- Understand processing speed and why is it critical for learning
- How processing speed differs from other fundamental cognitive blocks
- Understand behavioral and academic “Look-Fors”
- How to properly assess processing speed



## Key Points: Processing Speed's Impact in Learning Disabilities

- **Processing Speed is the speed at which information comes into the brain, processed, stored, and then outputted.**
- **Important: There are various types of processing speed.**
- **Neurocognitive considerations - intra-cranial communication**
- **Sensitive, but lacks specificity**

## Building Blocks of Brain Development ©

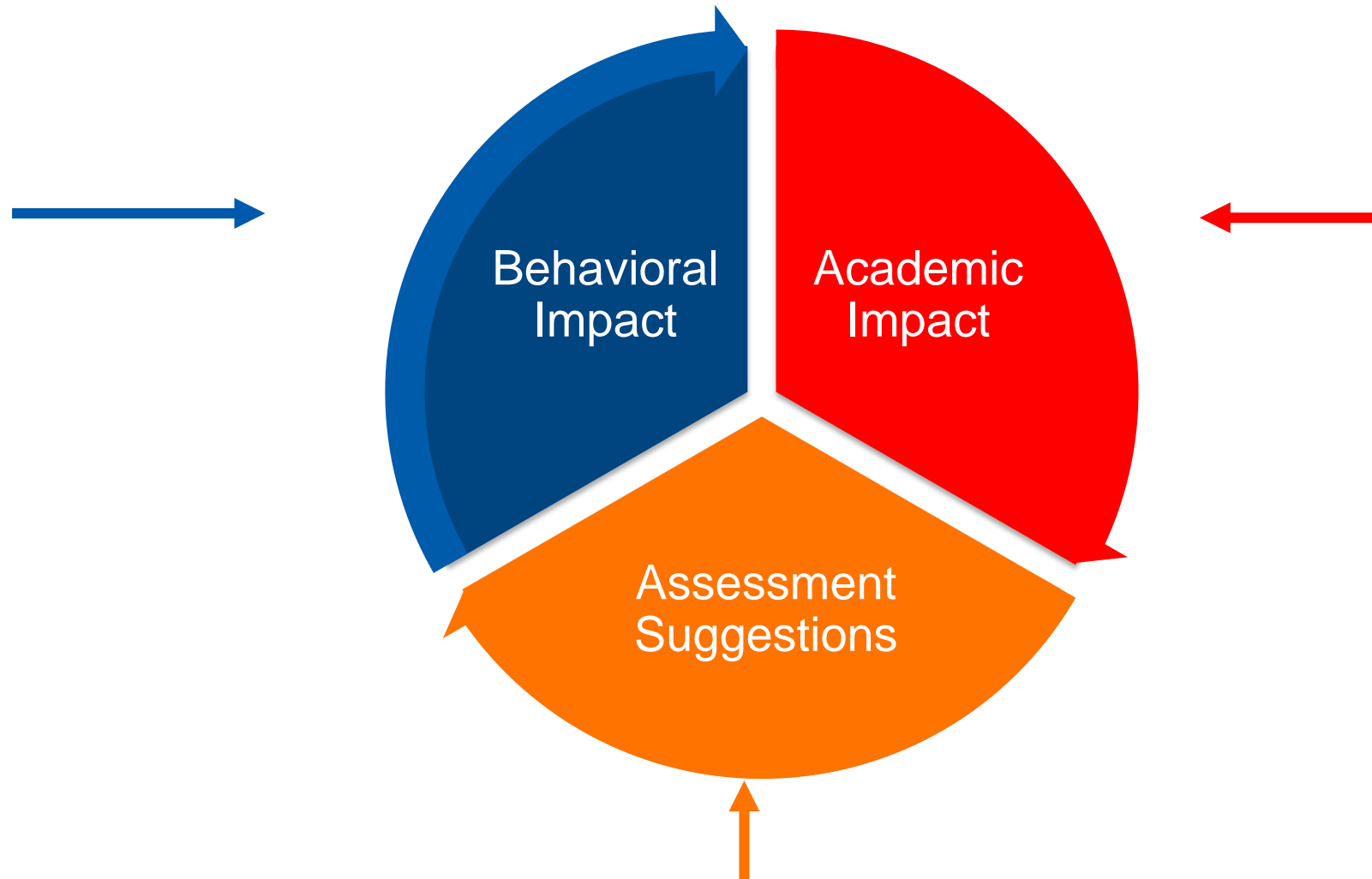


The Hierarchy of Neurocognitive Functioning © - created by Peter Thompson, Ph.D. 2013, adapted from the works of Miller 2007; Reitan and Wolfson 2004; Hale and Fiorello 2004.  
The Building Blocks of Brain Development © - further adapted by the CO Brain Injury Steering Committee, 2016.



# Processing Speed: 3 key Aspects to Consider in SLD Evaluations

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# *Behavioral* Impacts (Look-Fors)

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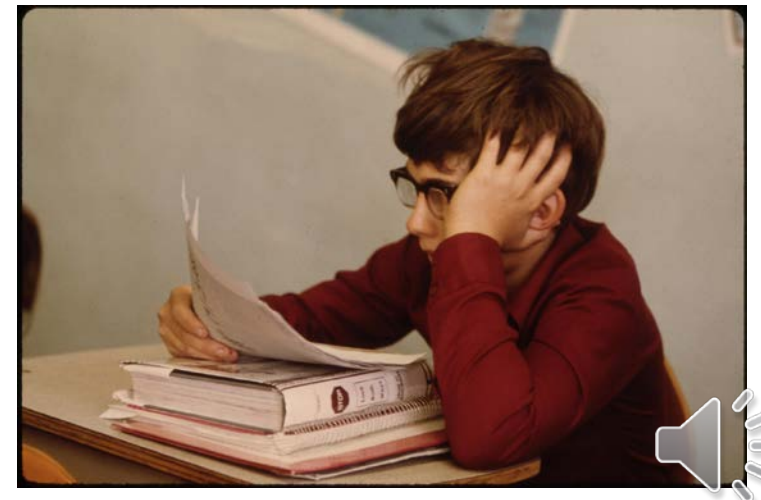
- Appears confused, doesn't understand
- Appears inattentive, lost
- Delay in verbal and/or written response
- Fatigues easily (cognitive fatigue)
- Easily and/or chronically frustrated
- Slow to follow directions



# *Academic* Impacts (Look-Fors)

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- Delayed response when asked a question in class
- Difficulty following lectures
- Difficulty multi-tasking
- Inconsistent learning of new information





# *Academic* Impacts (Look-Fors) Cont.

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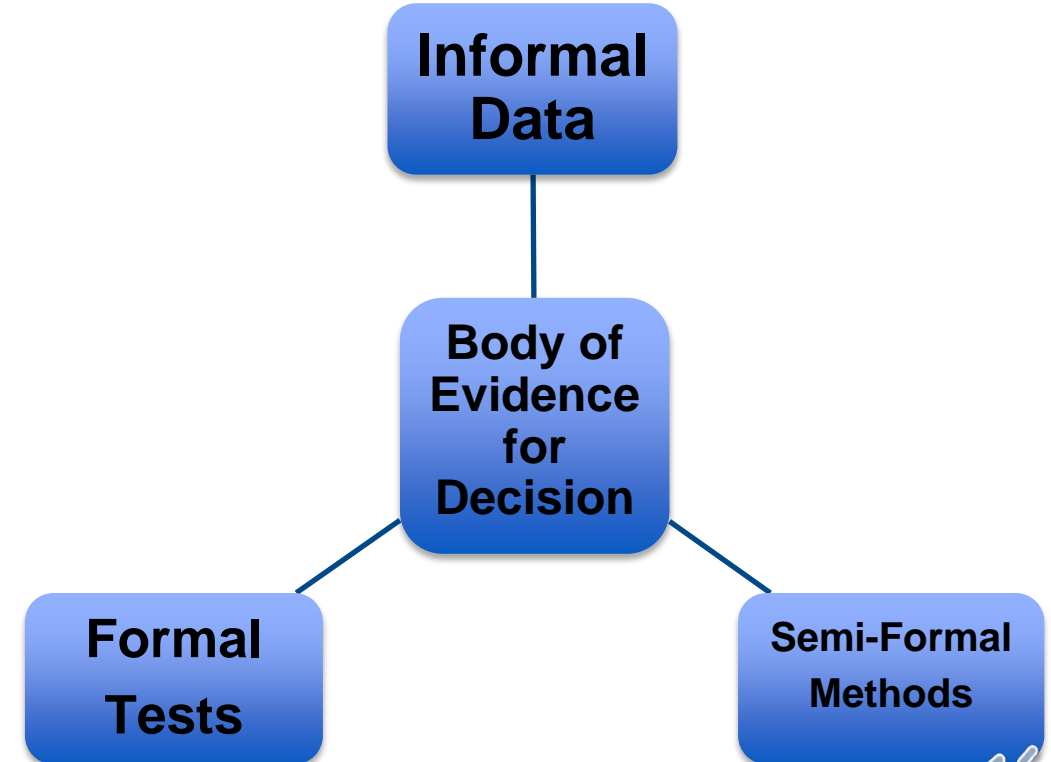
- Difficulty taking timed tests
- Academic fluency
- Incomplete work
- Poor grades despite good effort
- Slow at doing most schoolwork
- Chronically needs help “catching up”



# Assessment Suggestions: Processing Speed

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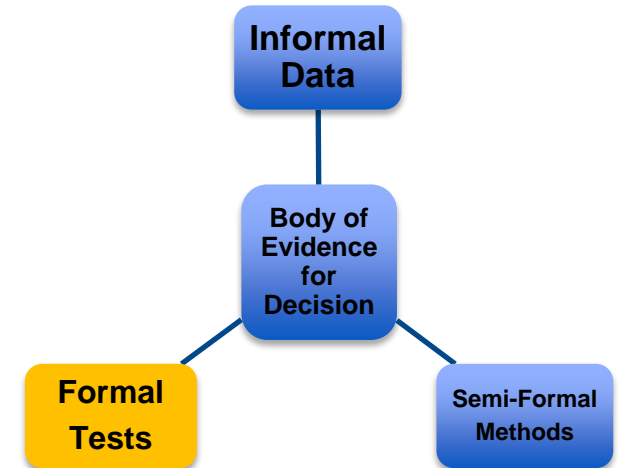
- Use 3-Factor Model for Assessment
  1. Formal
  2. Informal
  3. Semi-Formal



# Formal Methods: Processing Speed

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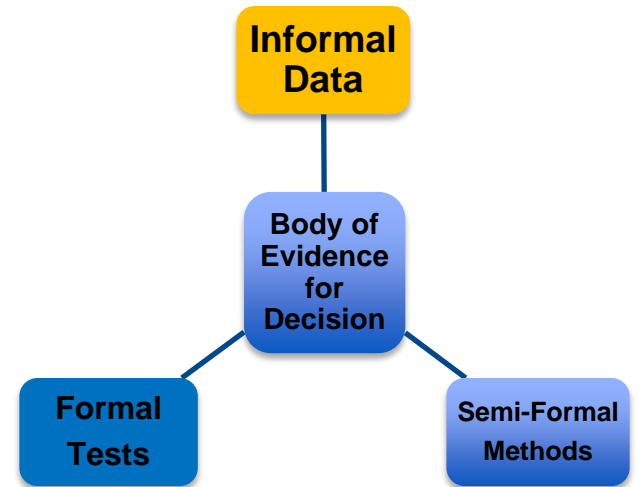
- PS=Highly sensitive, but lacks specificity
  - ADHD, TBI, SLD, RD
  - Use both visual-motor and verbal speed measures
- Formal Testing
  - Common on most test batteries
  - Rapid naming (verbal)
  - Visual-motor (cancelation)



# Informal Methods: Processing Speed

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- Parent, student, staff interview
- Records review- family history
- Medical history -TBI/multiple cx
- Observations-multiple settings
  - Timed tasks
- Work samples
  - Check for work completion



# Semi-Formal Methods: Processing Speed

- Self-made processing speed rating scales (may not have standardized scores)
- Symptom checklists
- NEF

**Appendix E: Neurocognitive Evaluation Form**

**Neurocognitive Evaluation Form (NEF)**

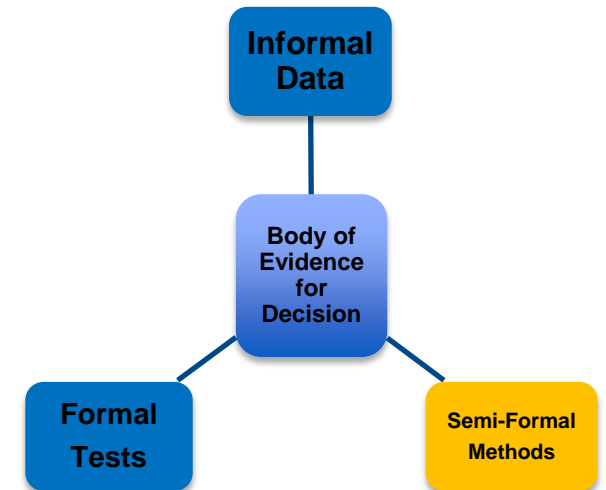
Rank the student on several areas of functioning as compared to the student's peers or classmates of the same age. A ranking of **Green** is considered an ability commonly observed in most (70%) students of similar age and is not an area of primary concern. A ranking of **Yellow** is an observed ability area where the student struggles but can perform the task intermittently. A ranking of **Red** is an ability rarely or never observed and signals a major area of concern. Areas ranked Red or Yellow are domains that may be targeted for further assessment.

Date: \_\_\_\_\_ Rater's Name/Title: \_\_\_\_\_

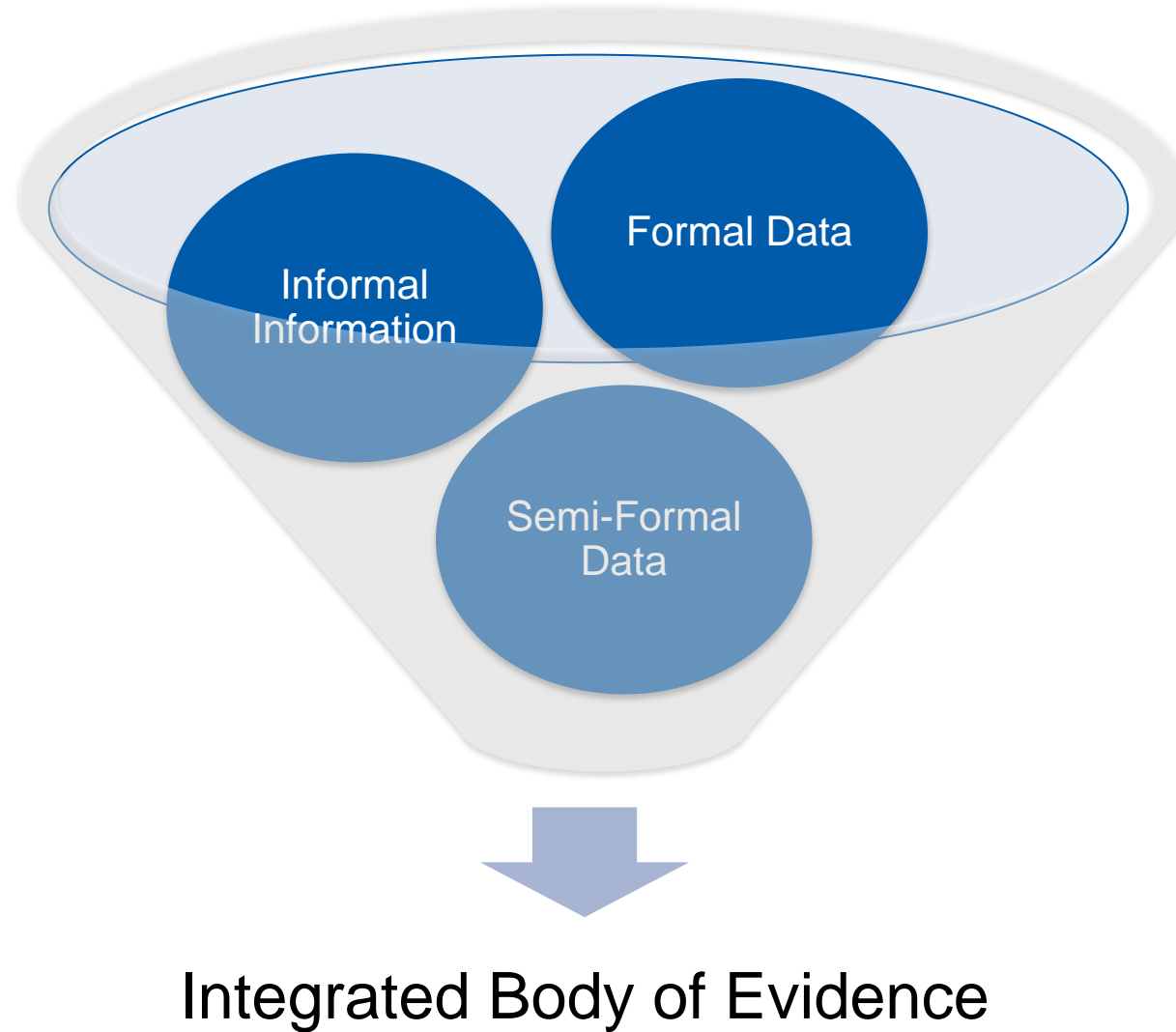
Student Name: \_\_\_\_\_ Student's Age and Grade: \_\_\_\_\_

Class Observed: \_\_\_\_\_ Time of Day and Day of Week: \_\_\_\_\_

ATTENTION & SUBTYPES	Less Positive		More Positive



# Examining Processing Speed




# Summary

## Fundamental Level: Processing Speed

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1. Highly sensitive to SLD, but lacks specificity.
2. Easy and reliably assessed using formal methods (Rapid Naming is key for RD.)
3. Various streams of data should be confirmatory. PS can be observed in the classroom and in work performance.





# End of Module 2.3

## Thanks for Listening



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