

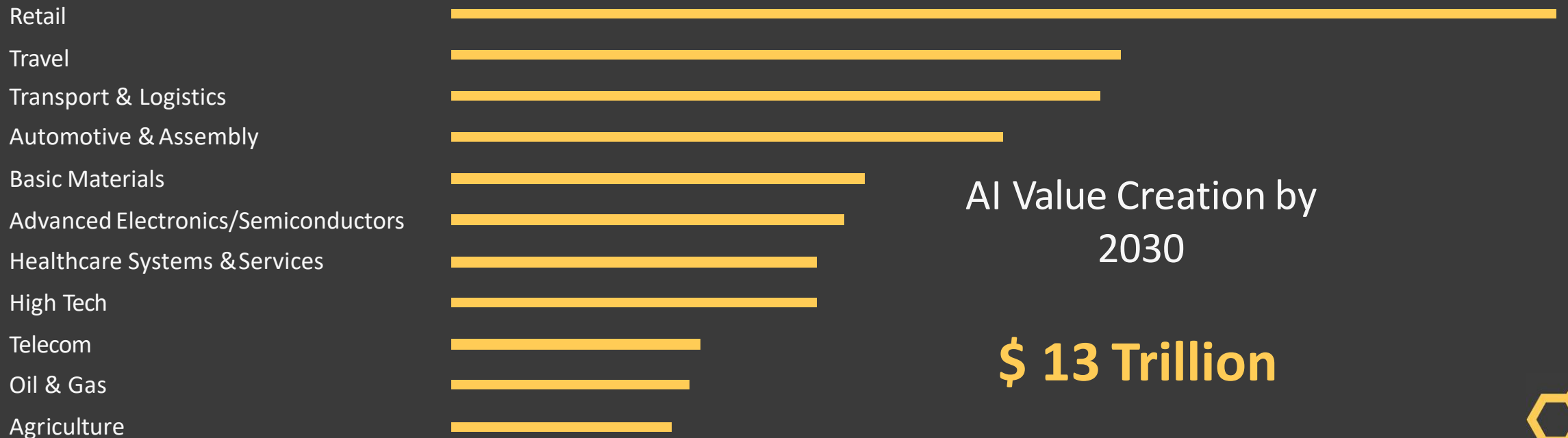
# 5G & Artificial Intelligence

Necessities  
and Ethics

 **TelcoMira**

# AI Economic Value

According to McKinsey Global Institute, AI will add annually a value of 13 Trillion US dollars by the year 2030.



AI Value Creation by  
2030

**\$ 13 Trillion**



# Why 5G?

## Enhanced Mobile Broadband

> 10 Gbps Peak  
100 Mbps Average



## Massive Machine-Type Communication

10x Connection Density vs. 4G  
10 Years Battery



## Ultra-Reliable & Low-Latency Communication

< 1 ms Latency  
~ 99.999999%



# Why 5G?



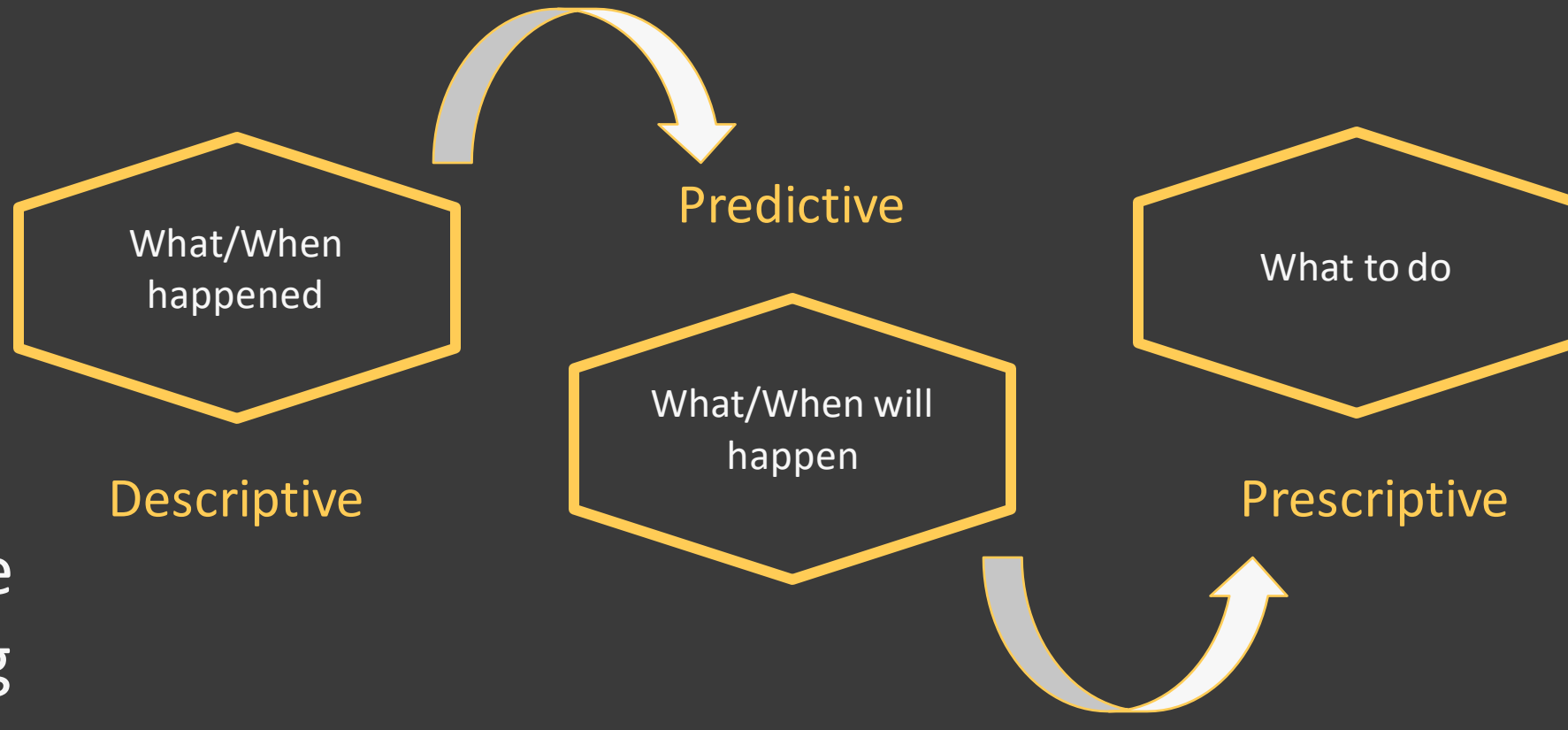
- Low Latency
- High Bandwidth
- Offload Processing

- Evolution of Cloud Computing.
- Migrating application housed in data centers to network edge "**closer to consumer**"
- Can be deployed anywhere in the network.
- Either radio or fixed network.



# Why AI?

- Ability for a machine to perform cognitive function like a human mind.
- AI consists of three elements: Sensors, Operational Logic and Actuators.



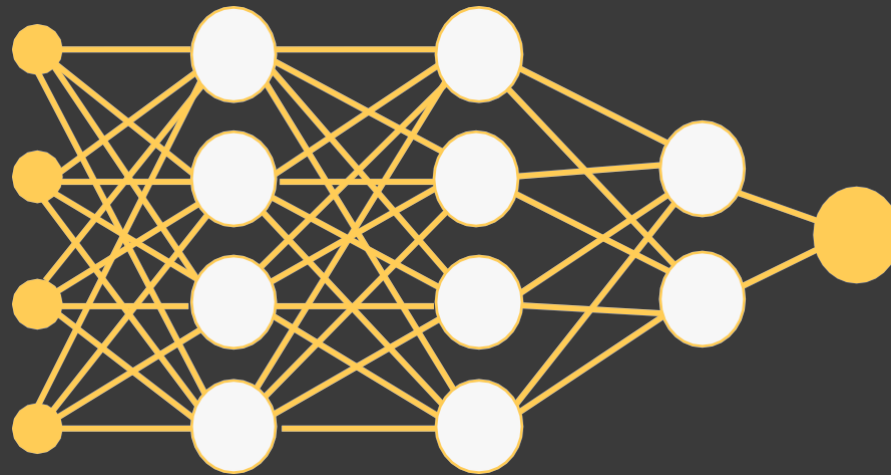
# Why AI?

## Supervised Learning



- Input to Output Mapping.
- More data will lead to better performing AI, but to a certain extent.

## Deep Learning

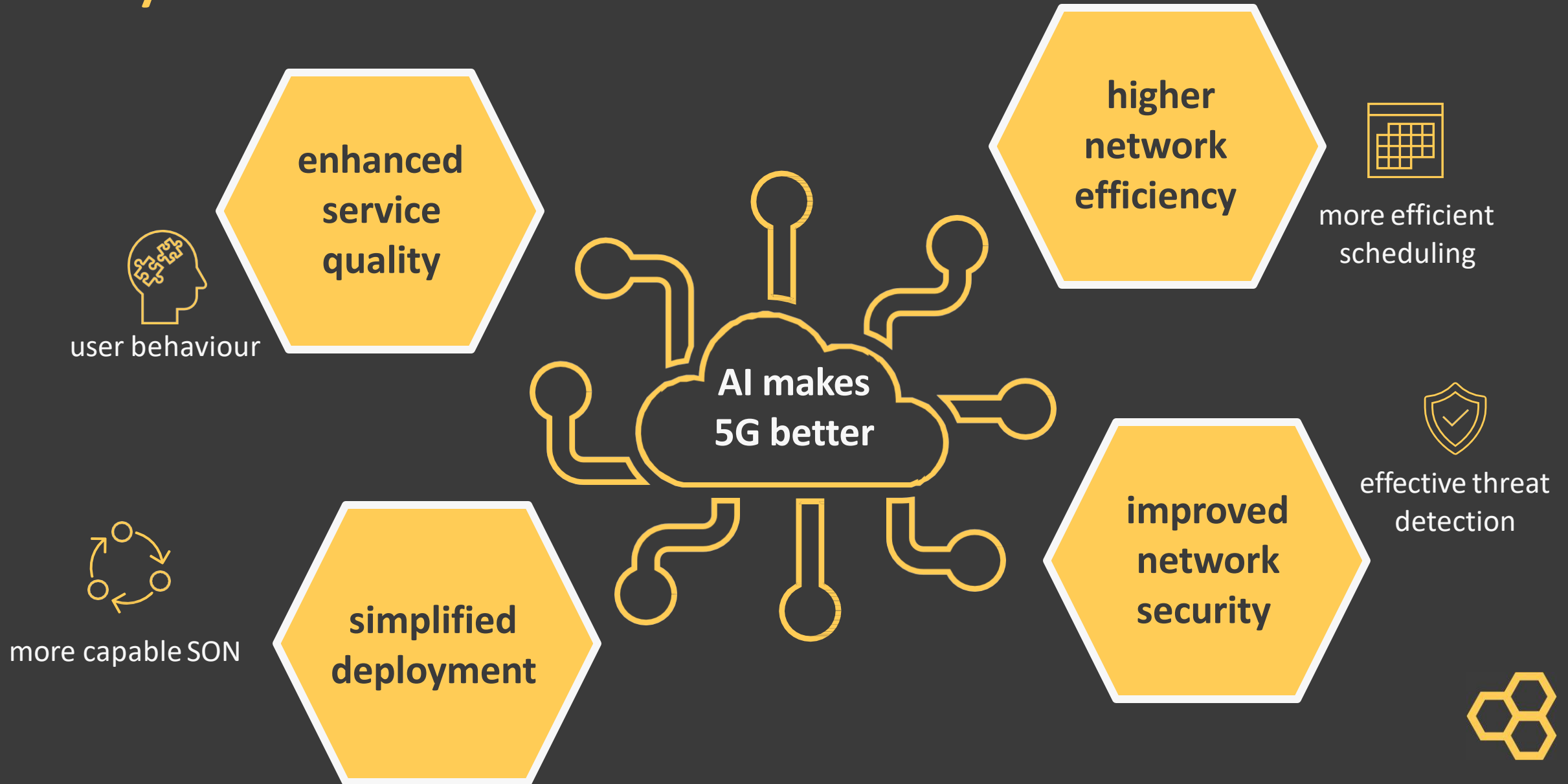


Neural Network

- AI has taken off due to "Deep Learning".
- AI performance depends on the size of the Neural Network.



# Why AI for 5G?



# Why 5G for AI?

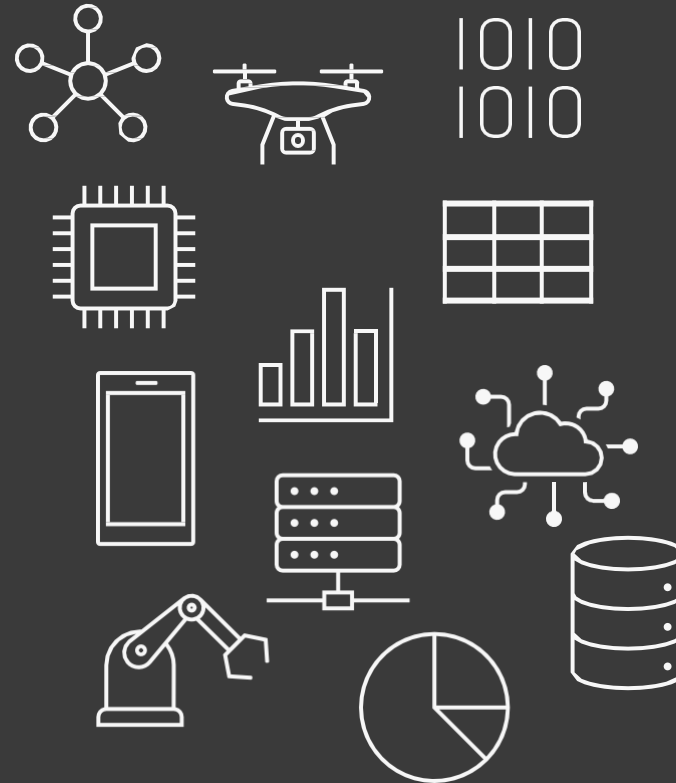
5G makes AI better by providing more **DATA**



interconnected sensors

high bandwidth, low  
latency

distributing and offloading  
AI computing





# Ethics in AI

**Discrimination**

**Privacy**

**Data Justice**

**Fairness**





## Get in Touch

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