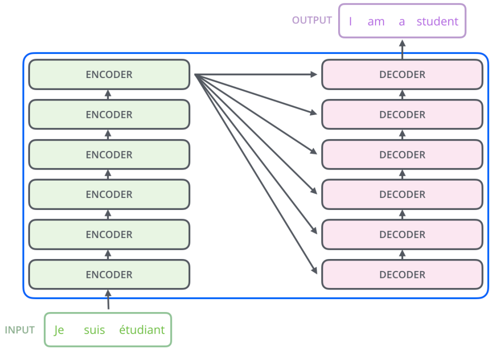
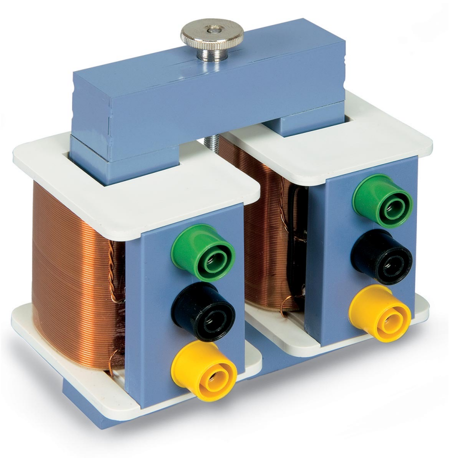
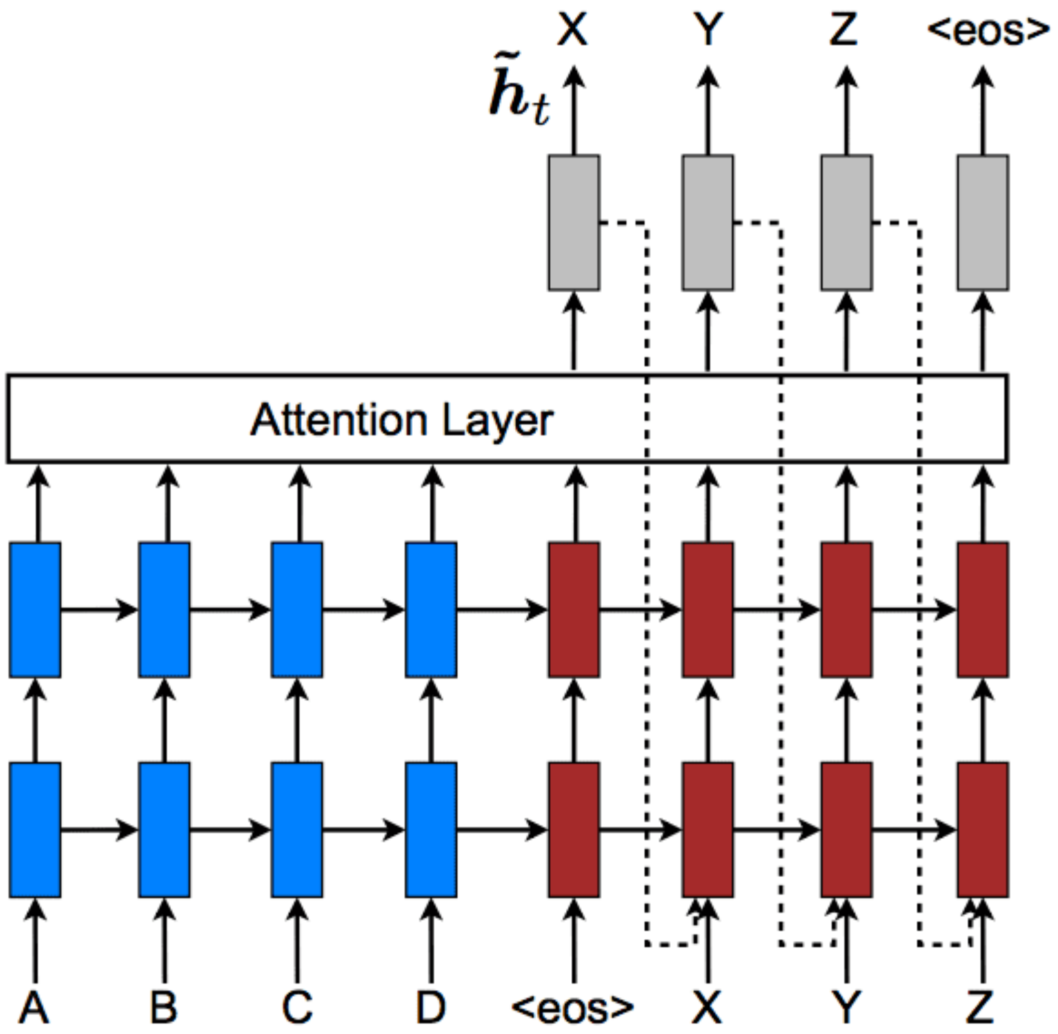
Transformers

Julio Waissman





Antes de los transformers



El artículo que cambió todo

Attention Is All You Need

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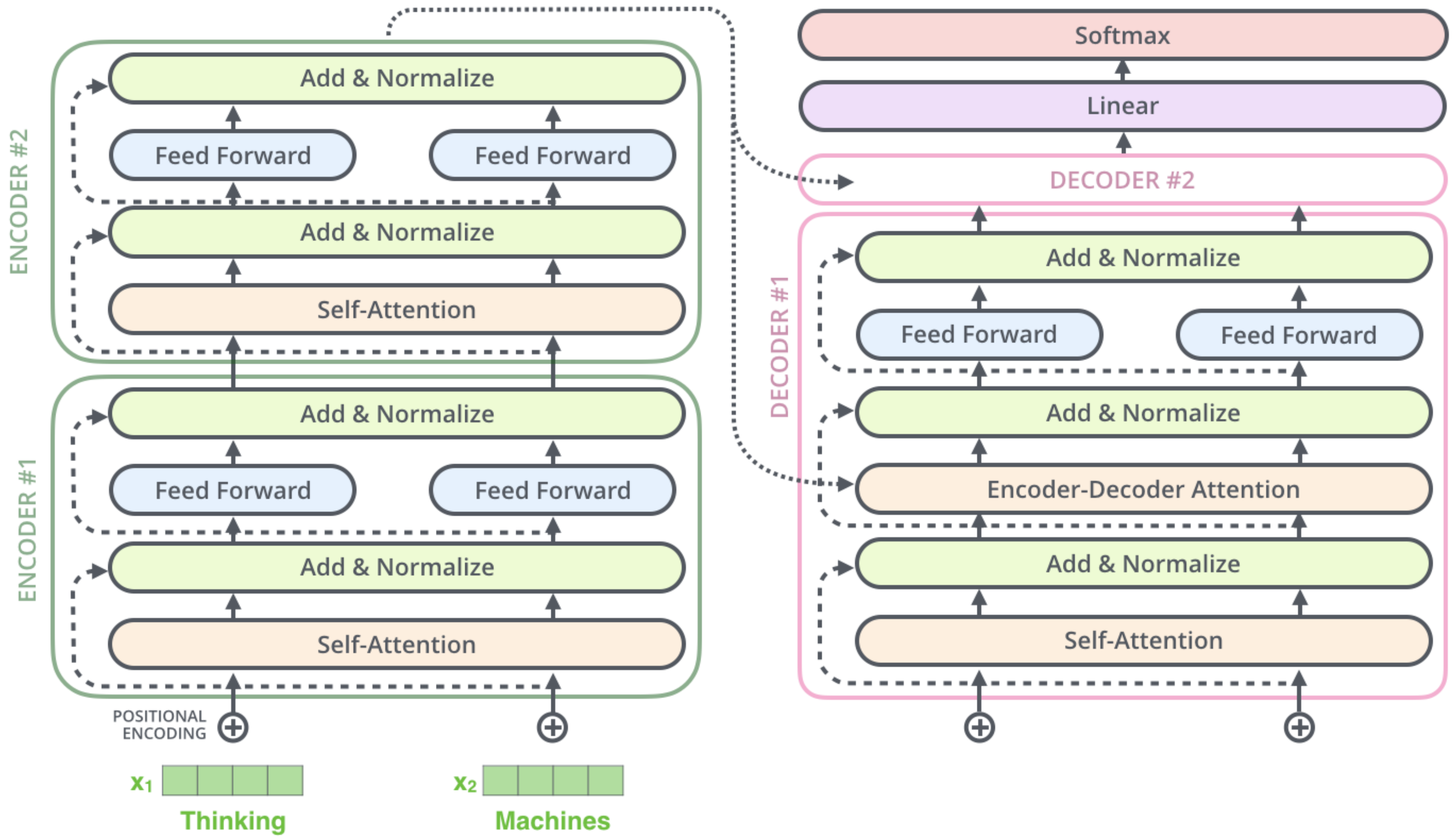
Modelo Propuesto (Transformer)

¿Cómo funciona todo?



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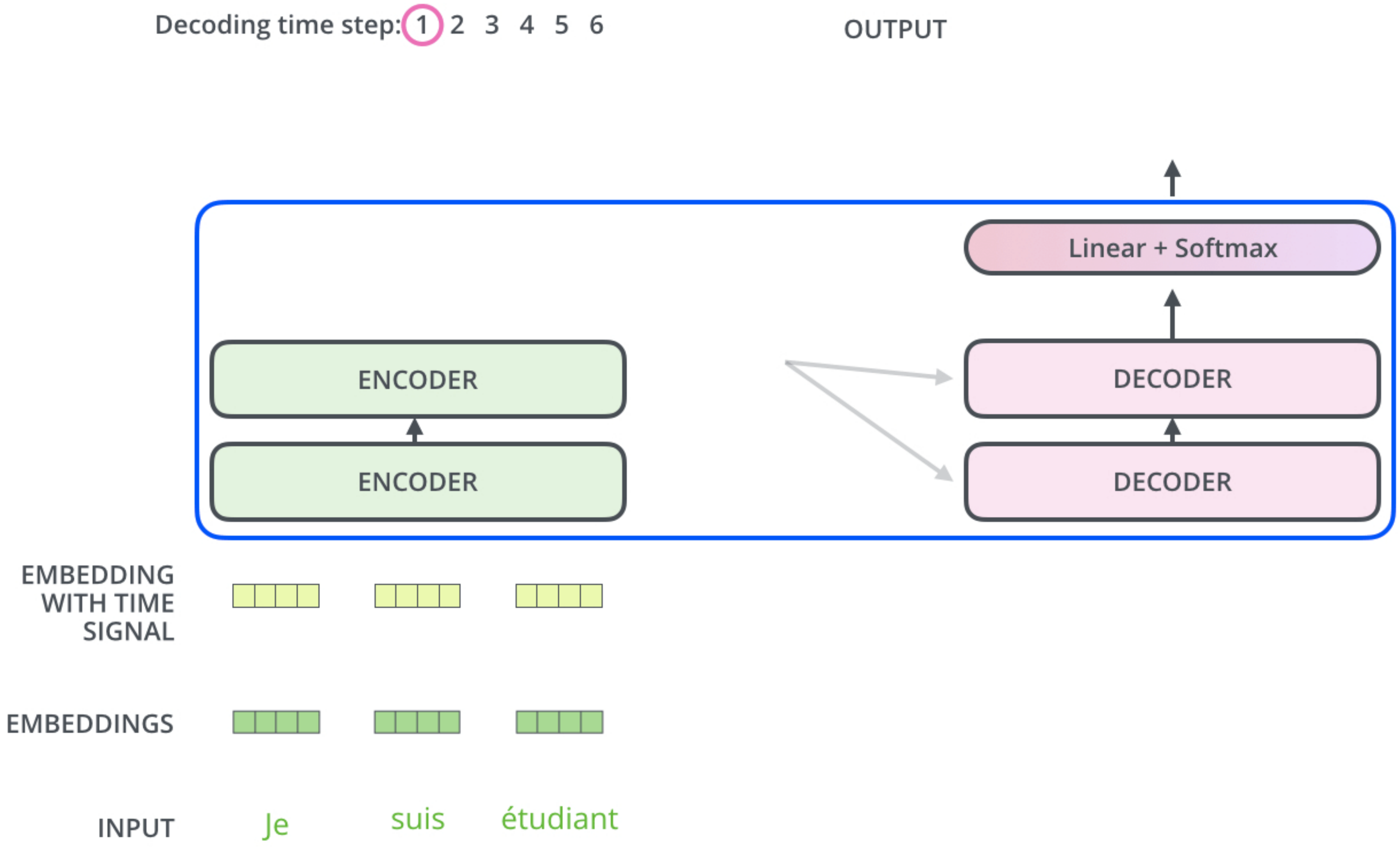

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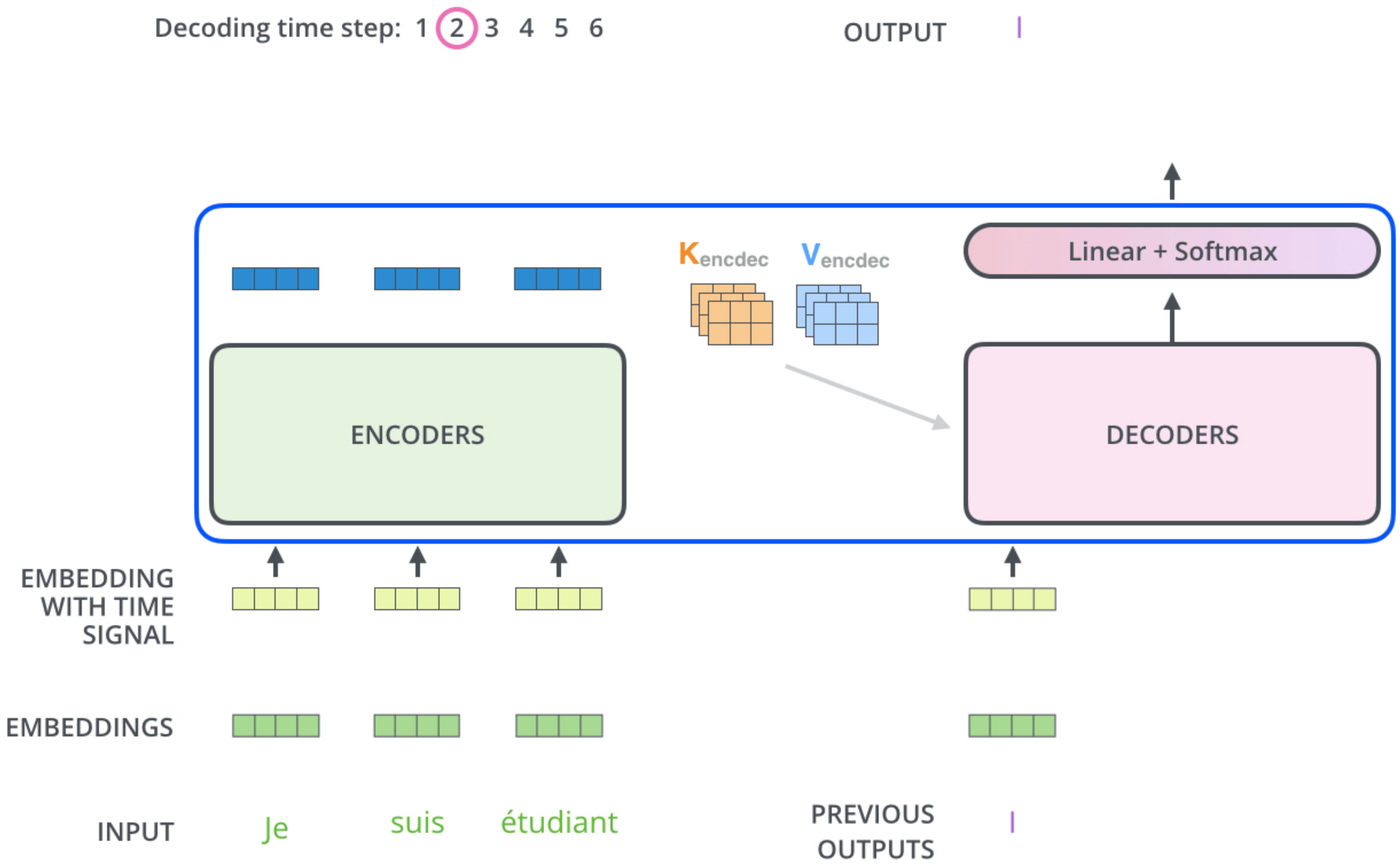
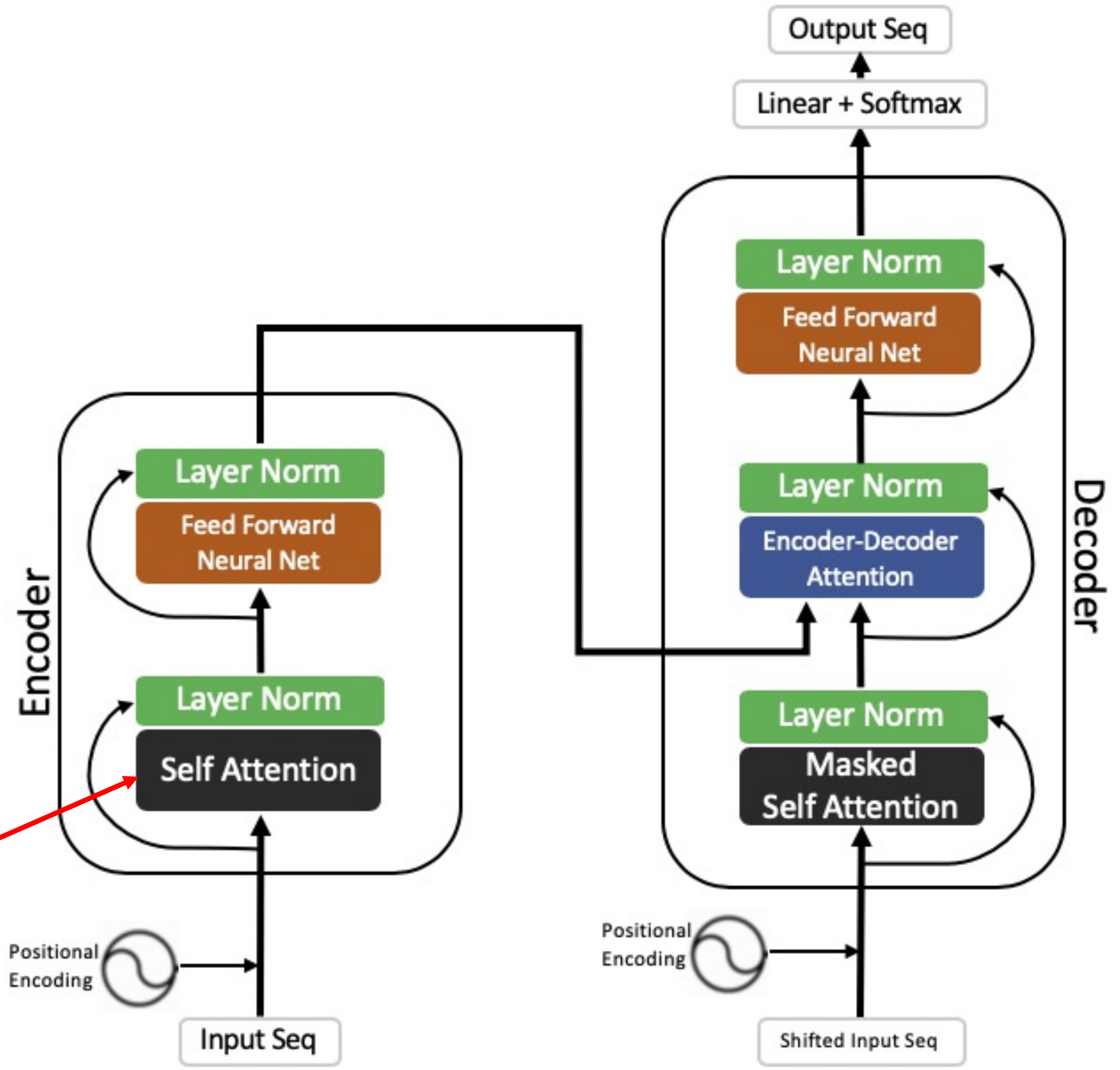


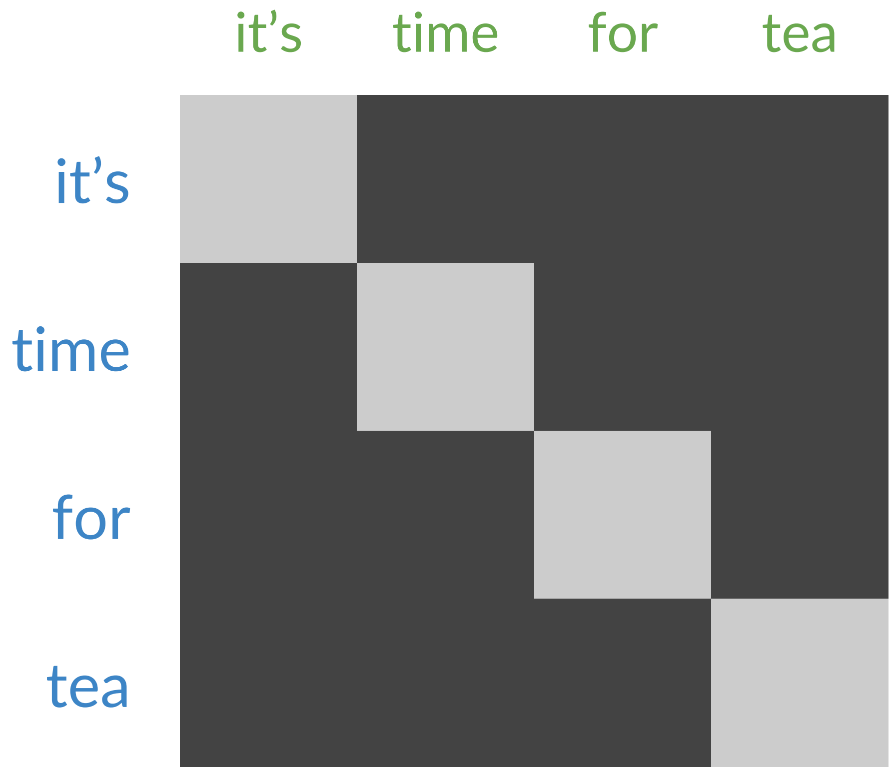
Modelo Propuesto (Transformer)

La unidad básica



Autoatención

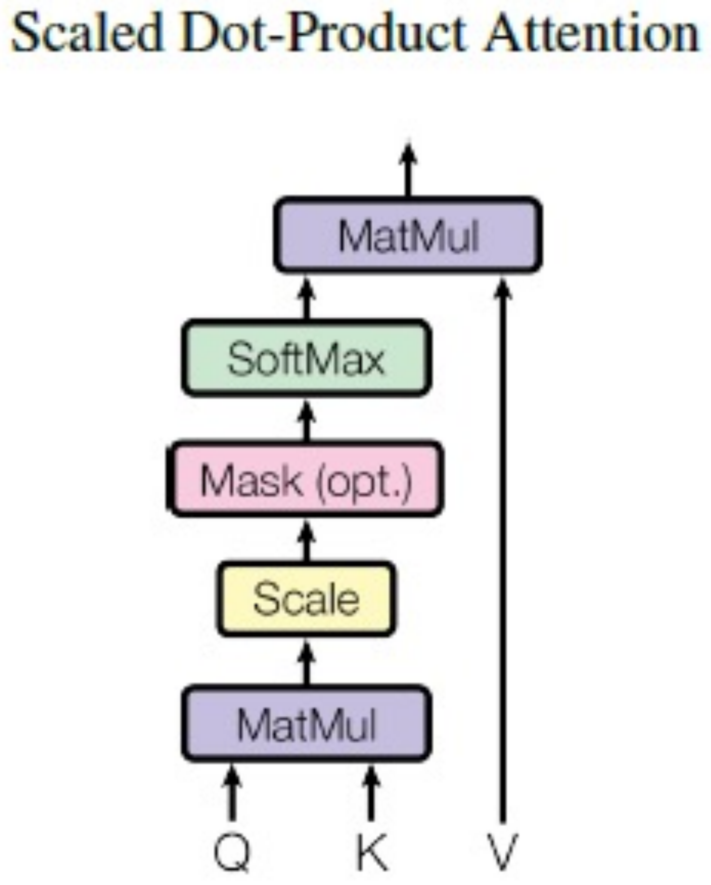
Queries, keys and values come from the **same sentence**

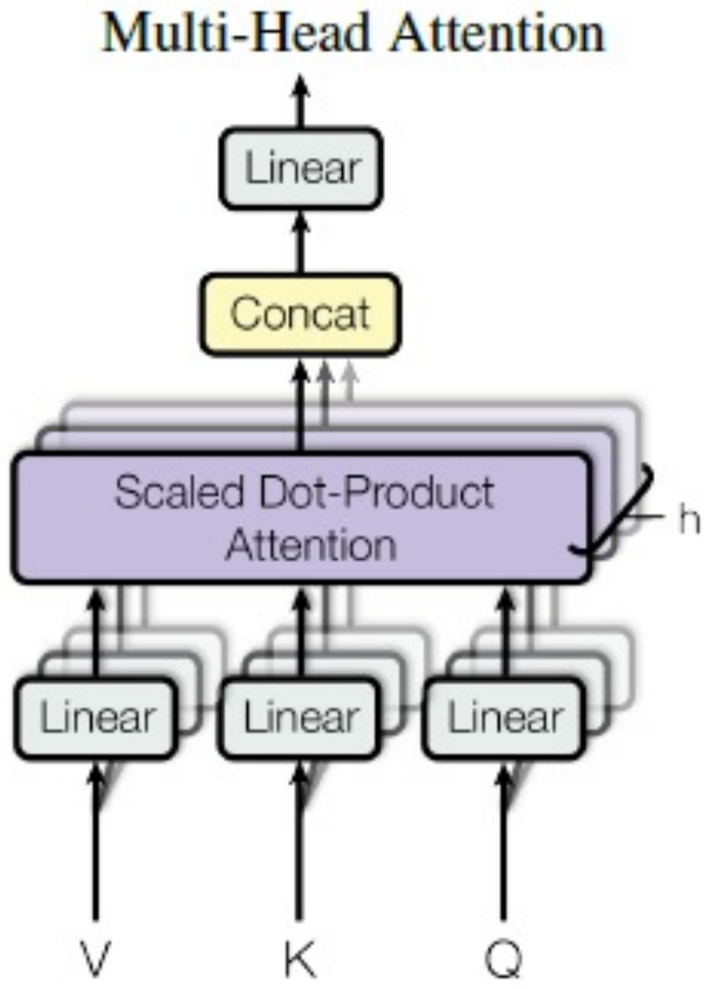


Weight matrix

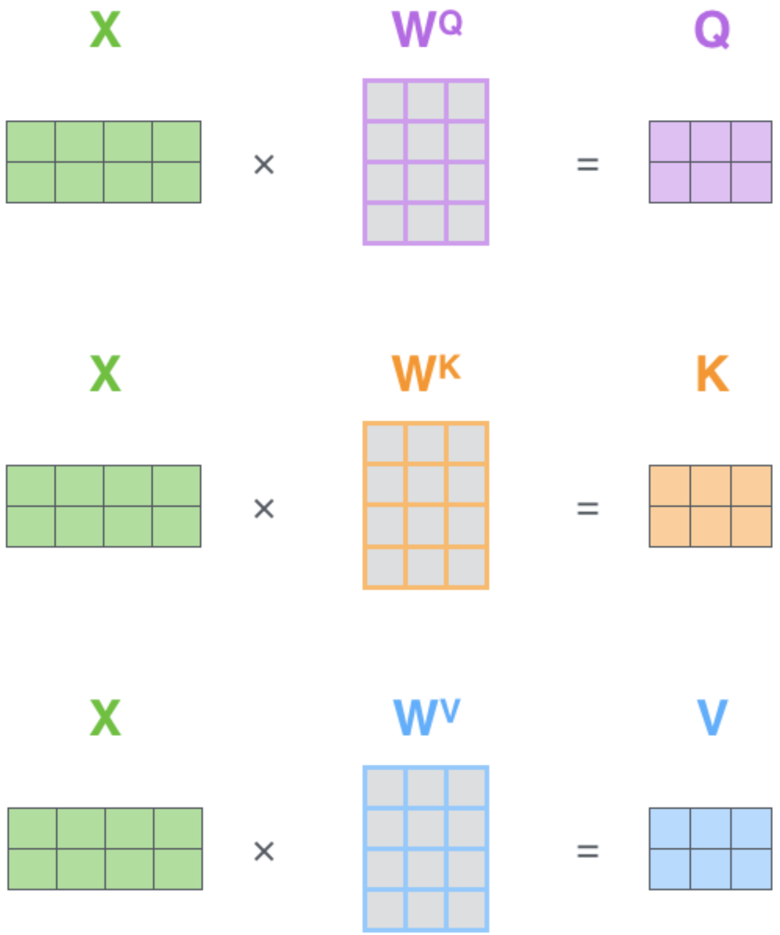
Meaning of each word **within** the sentence

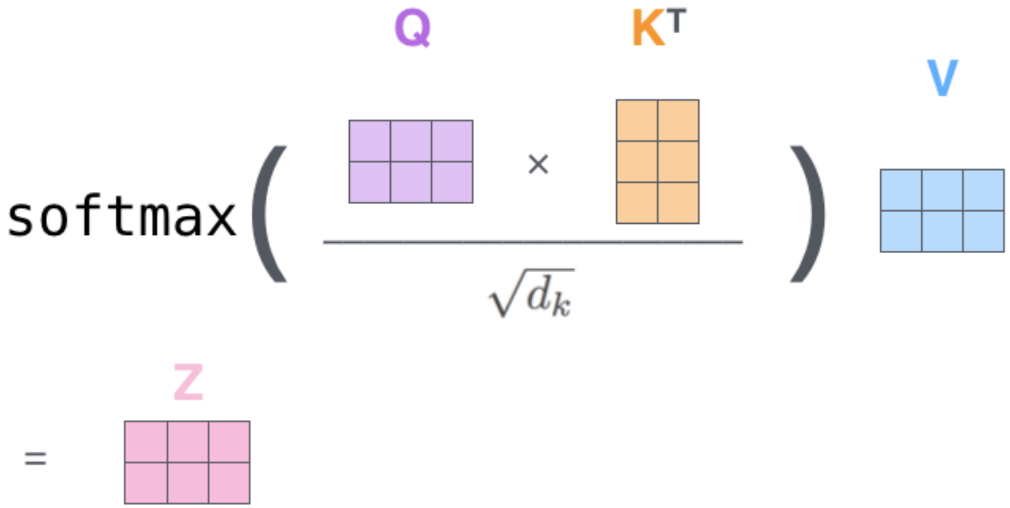
Attention vs MultiHead Attention



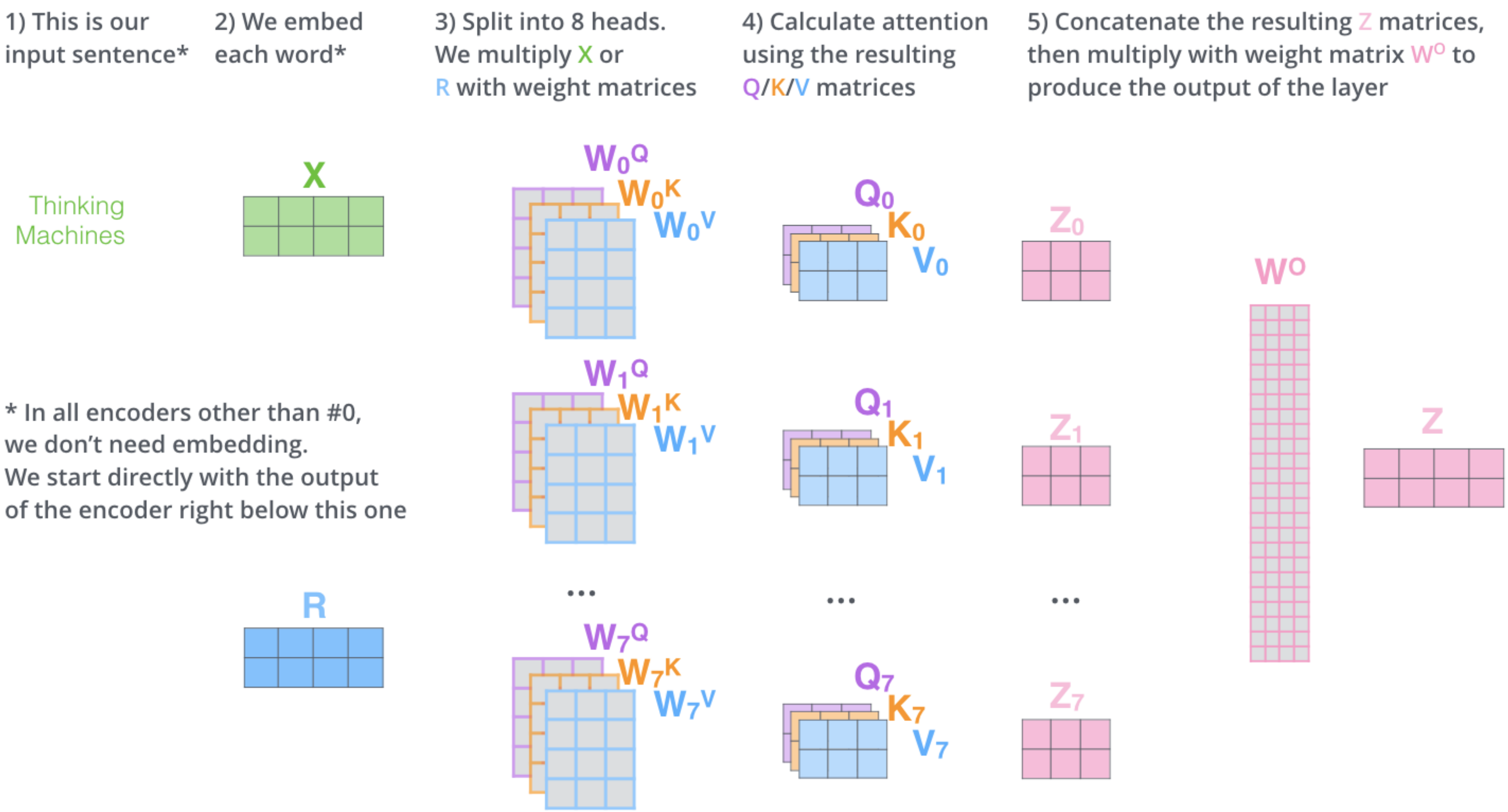


Self Attention



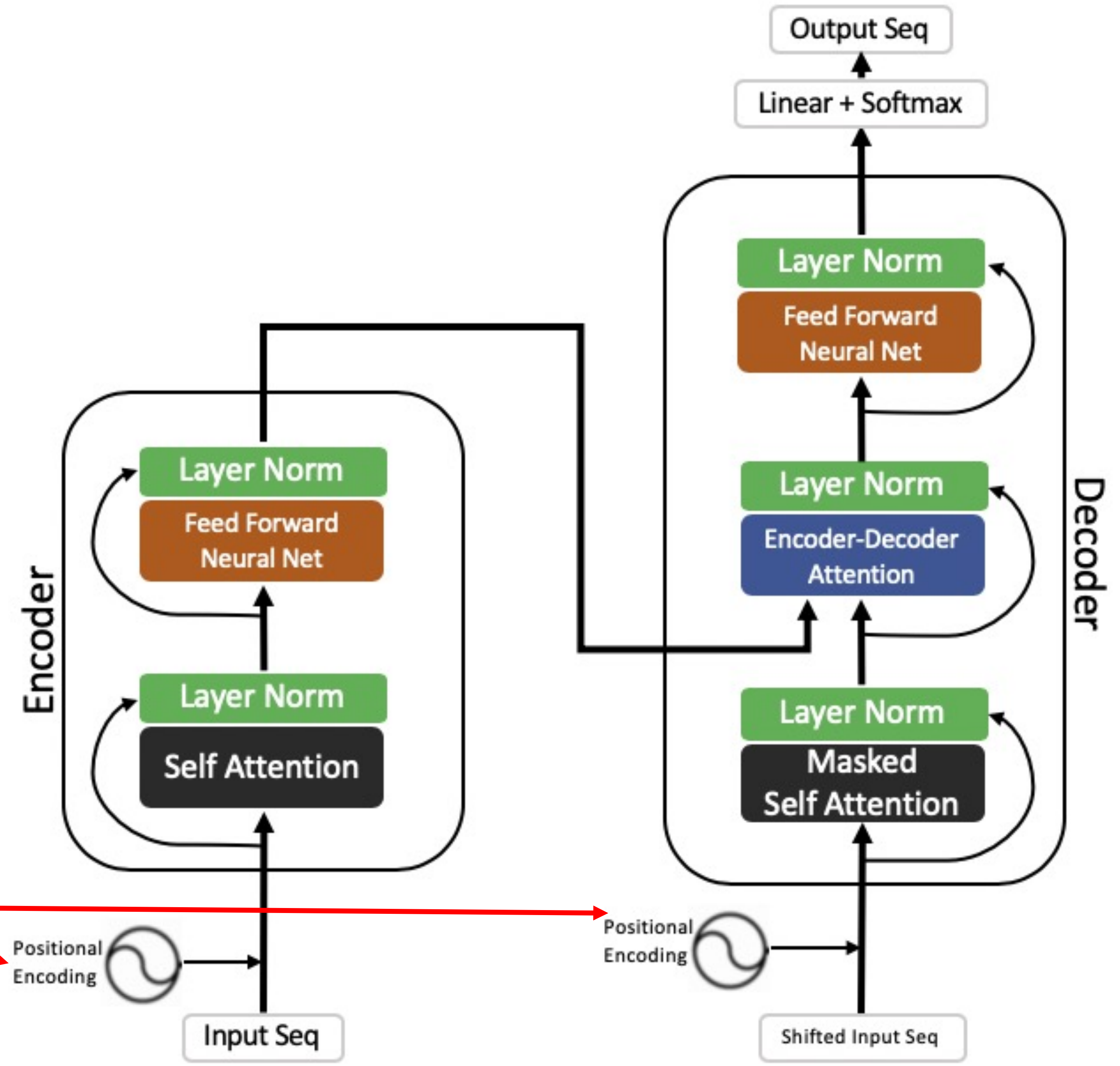


Multi-head Self Attention

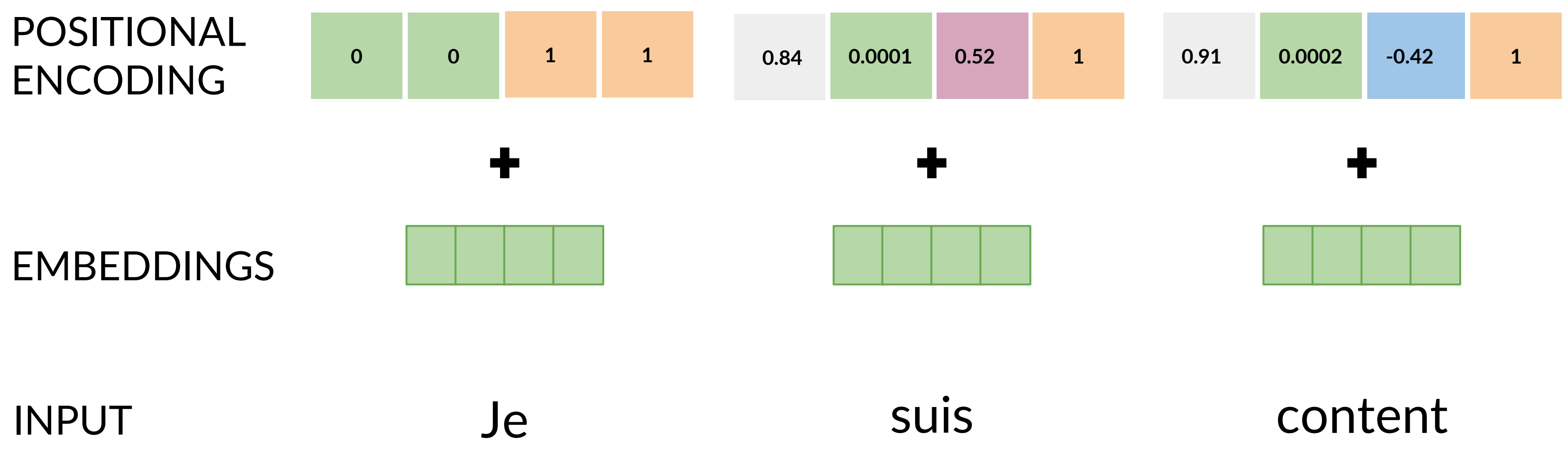


Modelo Propuesto (Transformer)

Mantener el orden de entrada



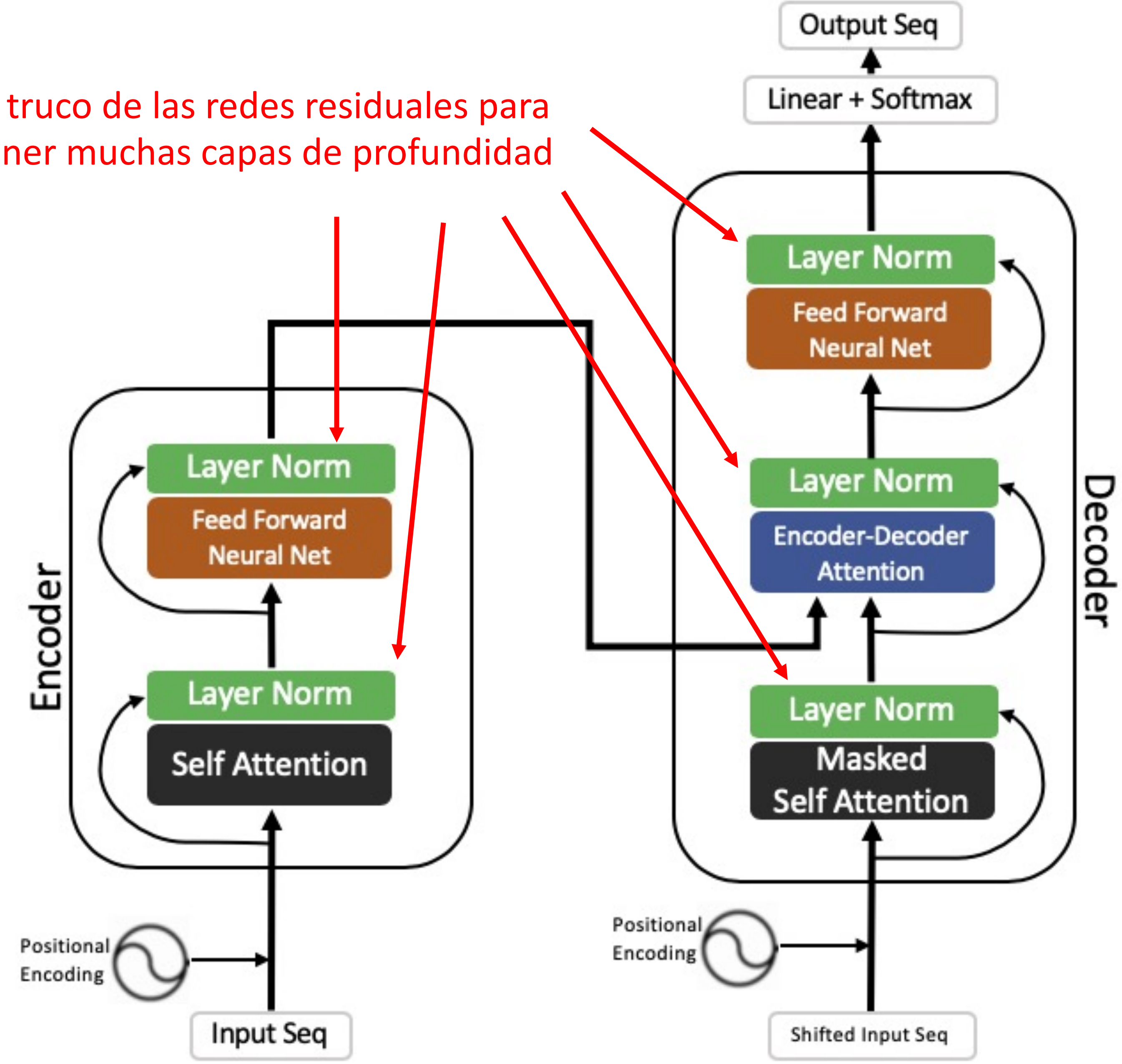
Positional encoding



RNNs vs Transformer: Positional Encoding

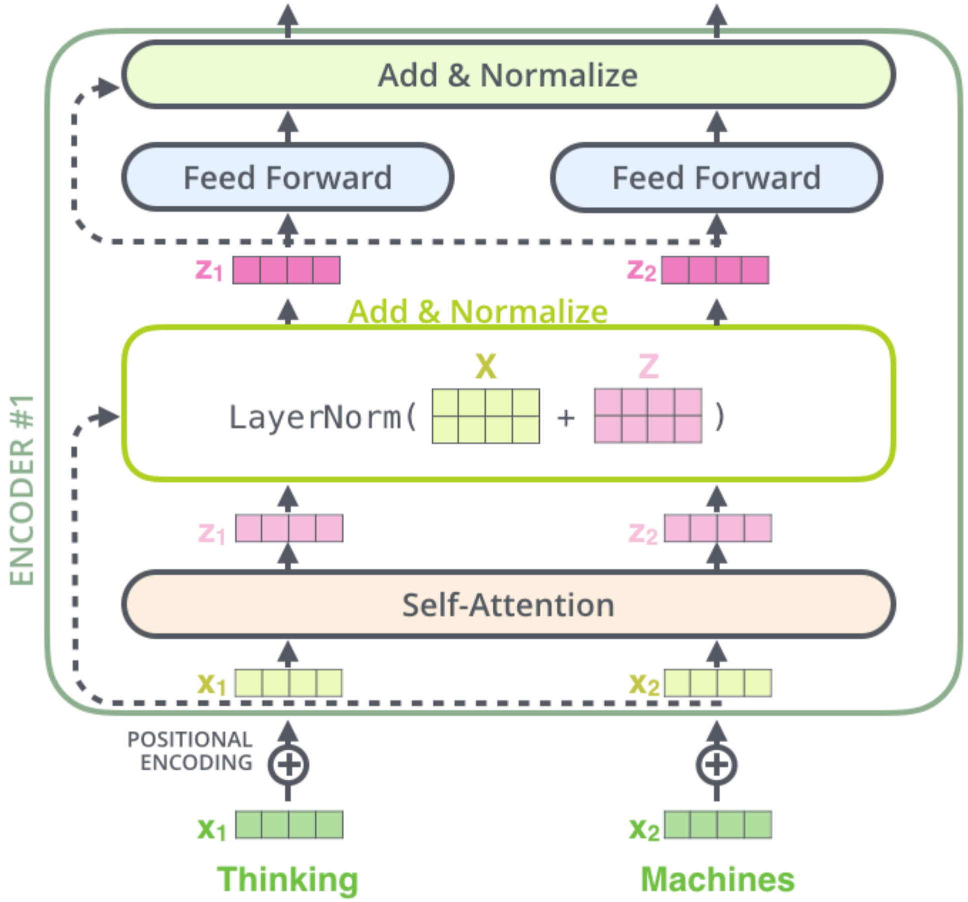
Modelo Propuesto (Transformer)

El truco de las redes residuales para
tener muchas capas de profundidad

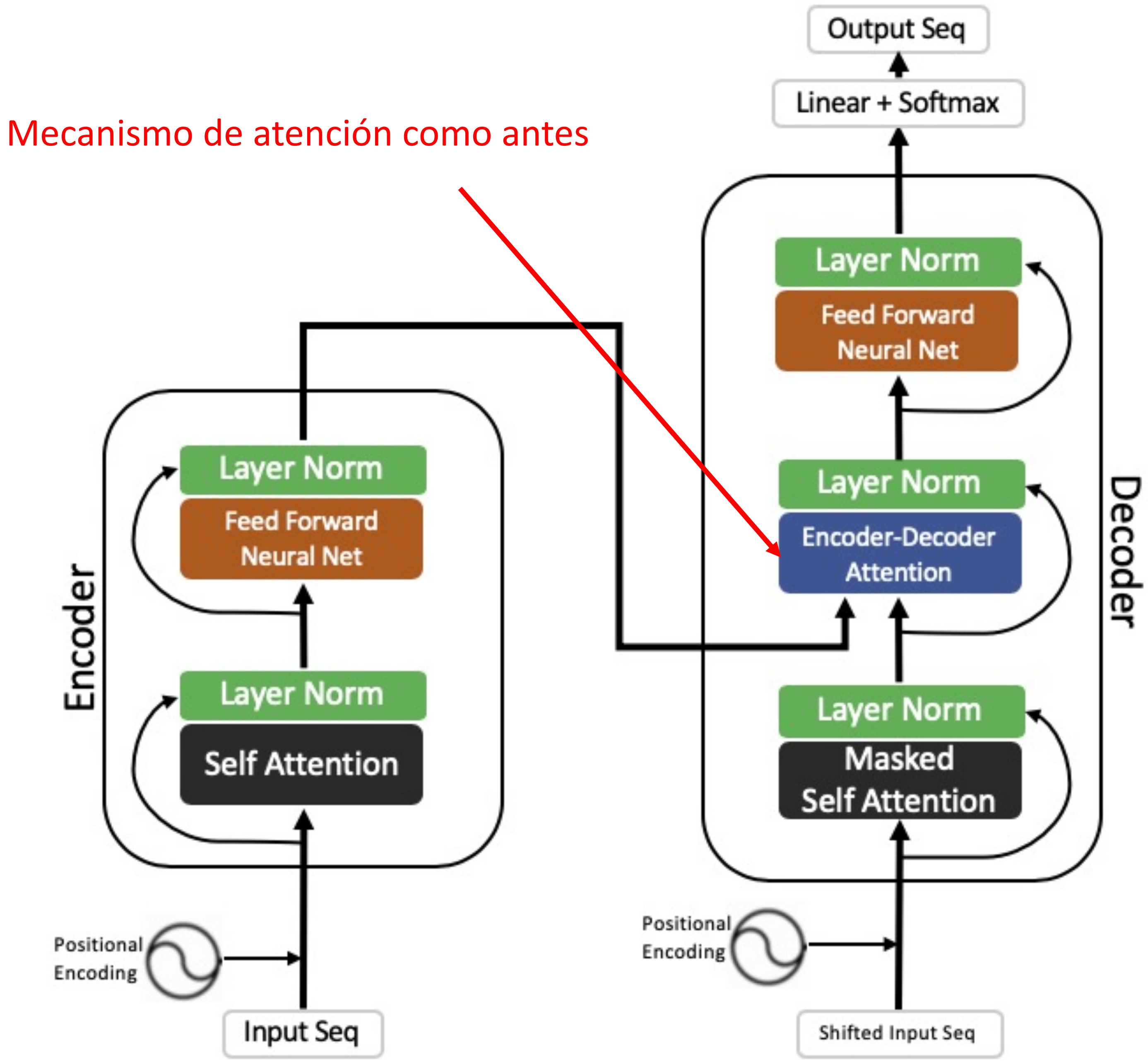


Deep Residual Learning for
Image Recognition

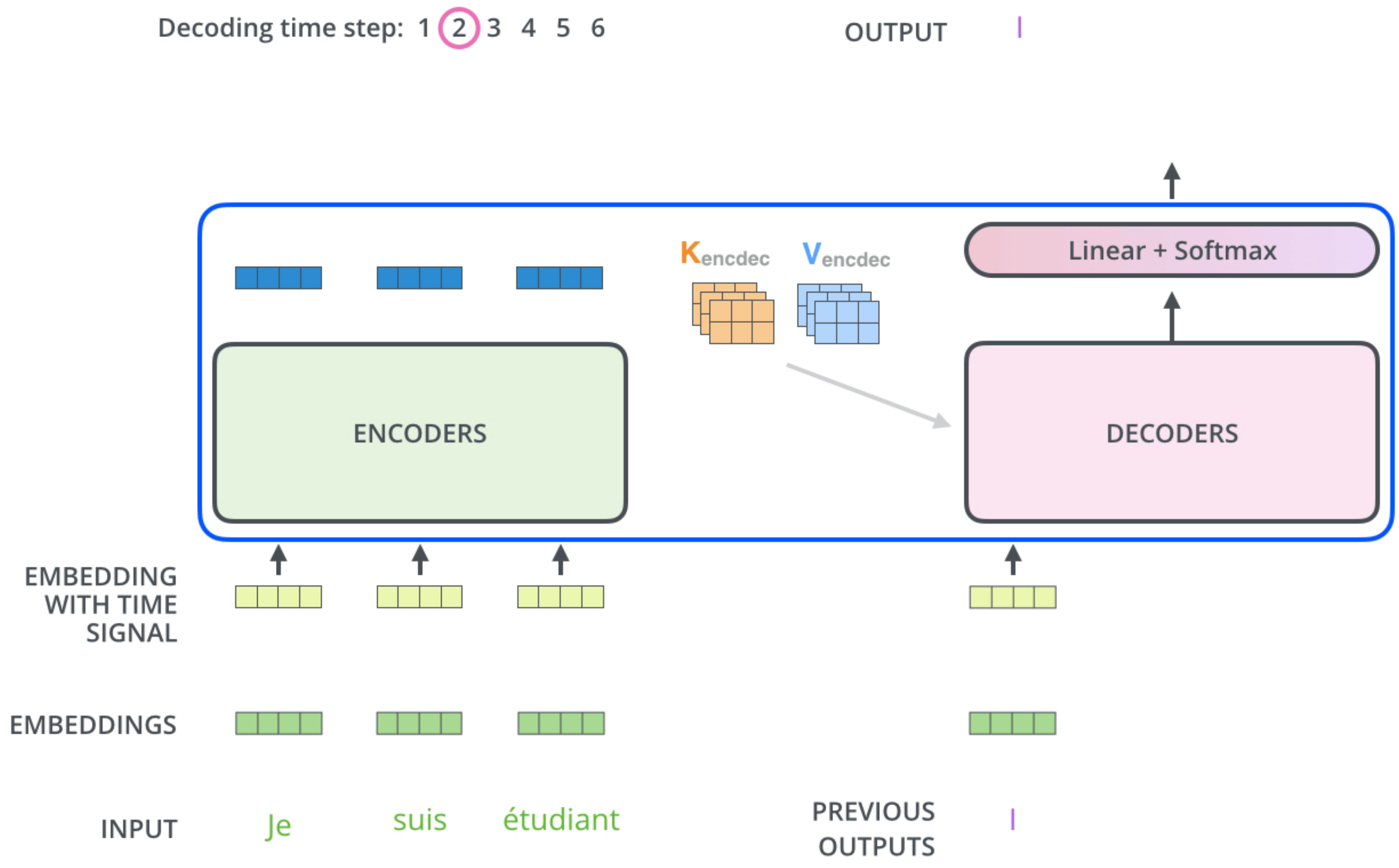
Add & Normalize



Modelo Propuesto (Transformer)

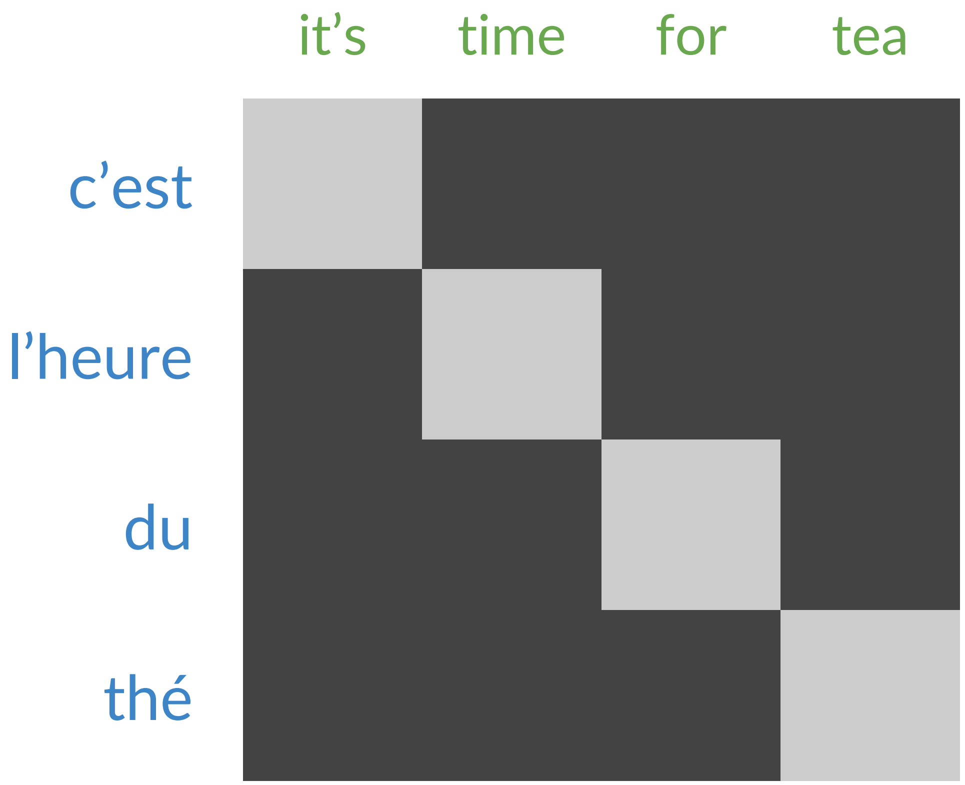


Encode-Decoder Self-Attention



Encoder-Decoder Attention

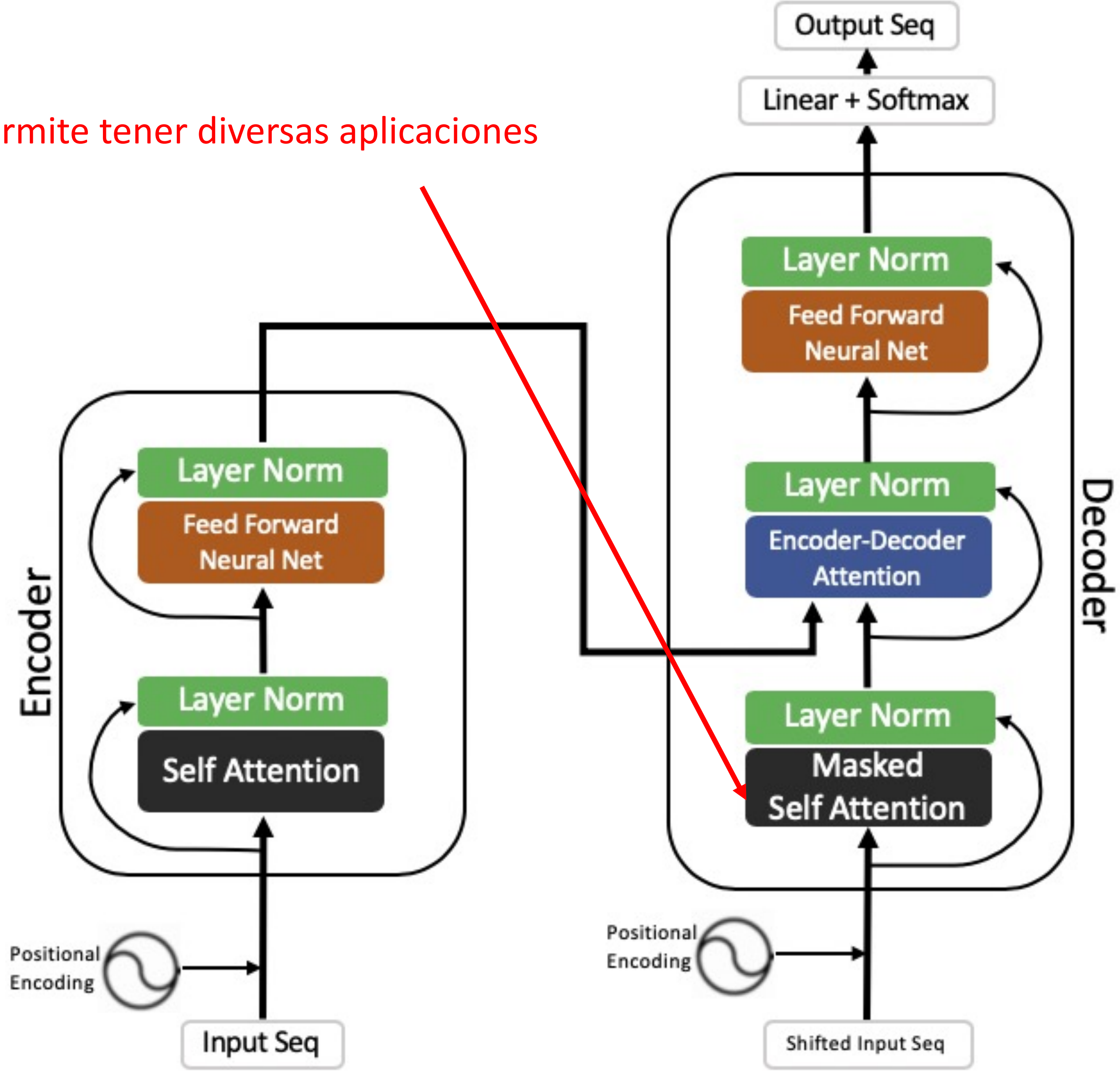
Queries from one sentence, keys and values from another



Weight matrix

Modelo Propuesto (Transformer)

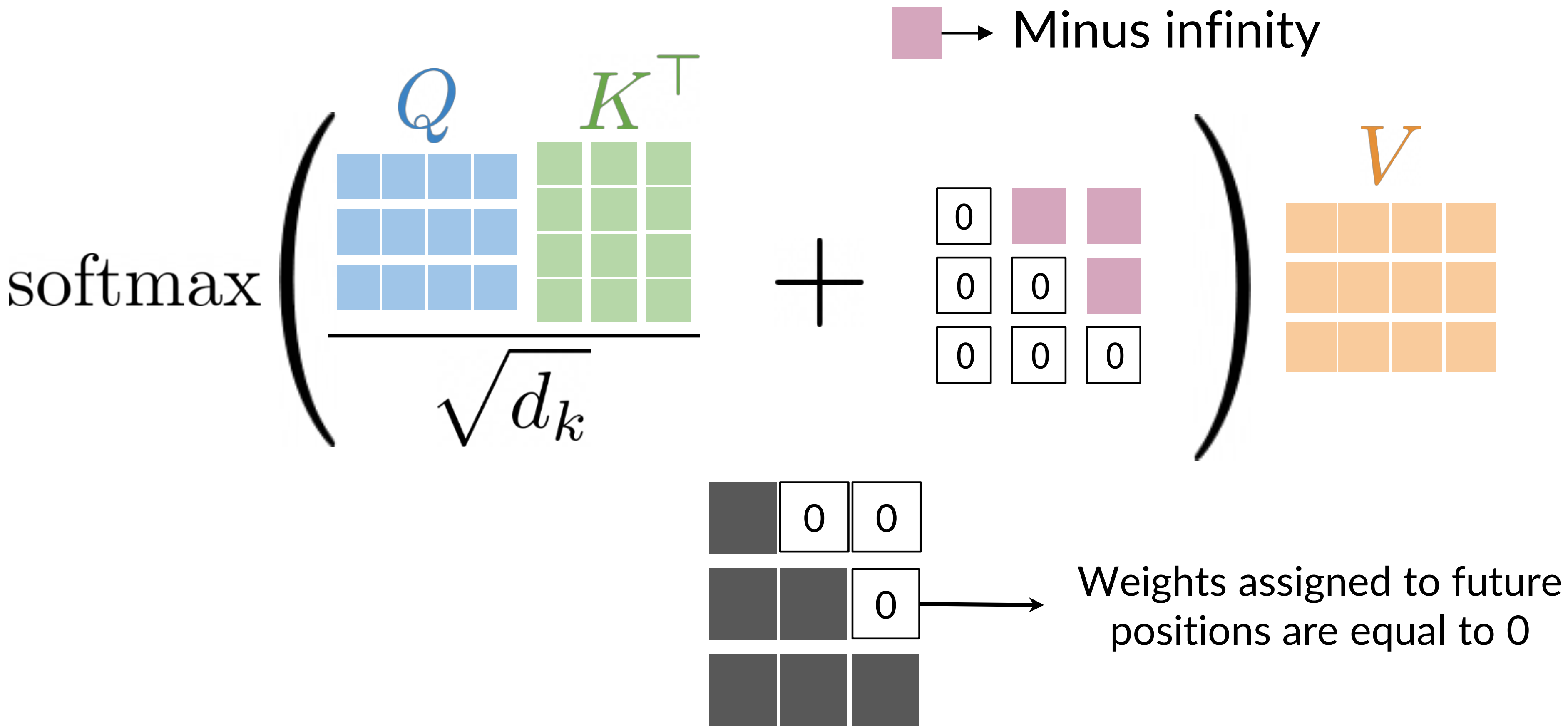
Permite tener diversas aplicaciones



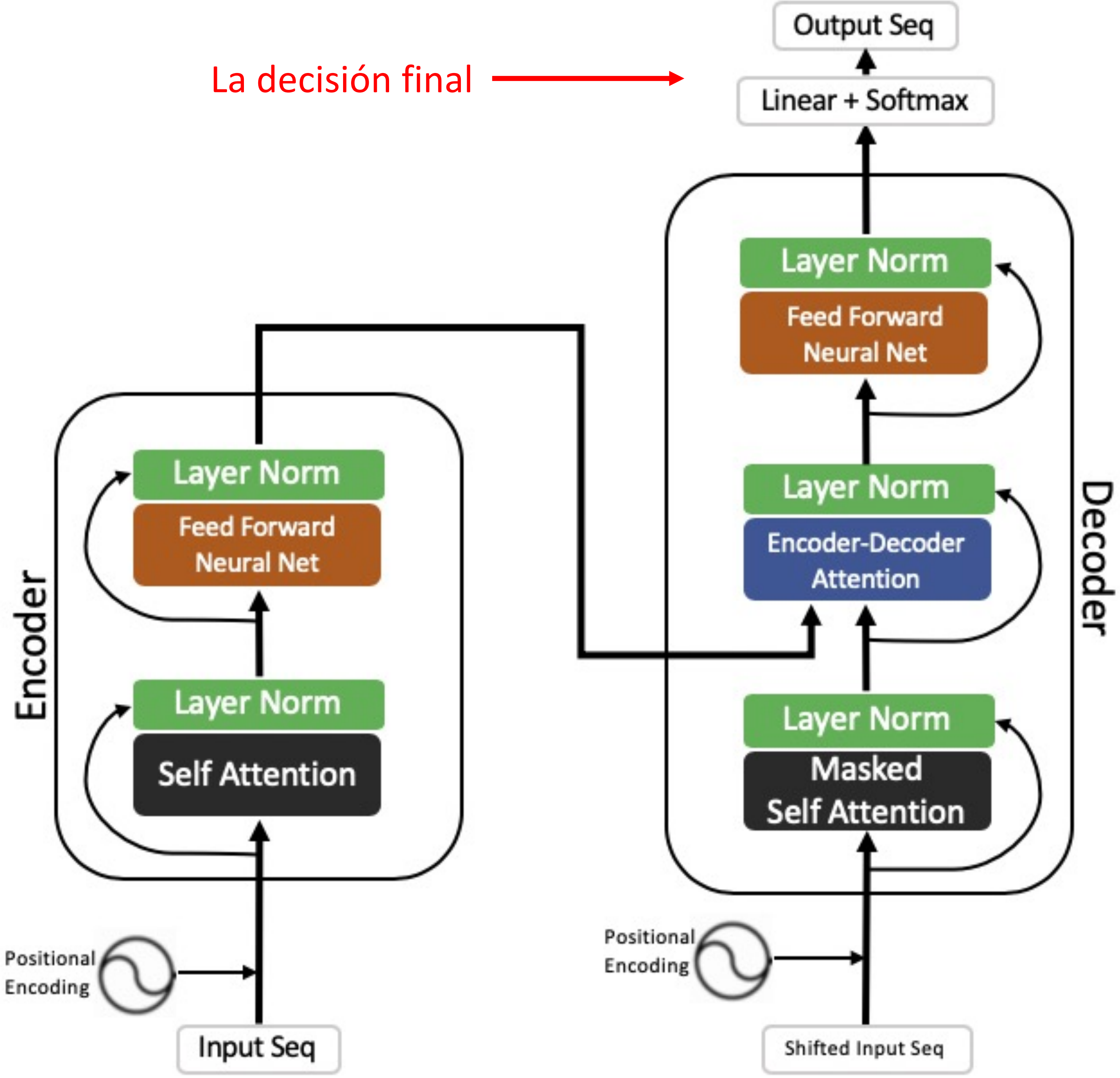
Masked Self-Attention

Queries, keys and values come from the **same sentence**. Queries don't attend to future positions.

¿Y cómo se hace el Masked Self-Attention?



Modelo Propuesto (Transformer)



Capa final de los decoders