# The Enigma Machine

1915, two Dutch Naval officers invented a machine to encrypt messages. This became known as the Enigma machine.

1918, Arthur Scherbius, a German businessman, patented the Enigma machine.

Mid 1920s, mass production of Enigma machine with 30,000 machines being sold to the German military over the next 2 decades.

The Poles set up a world leading crypt analysis bureau and hired leading mathematicians such as Marian Rejewski.

Marian Rejewski built his own model of the Enigma machine without having actually seen it.

In 1931, a German traitor told Rejewski that the Germans routinely changed the daily key indicator setting for the codes.

To find the daily key, Rejewski build 6 replicas of the Enigma machine and connected them.

The new machine could run through more than 17,000 indicator settings. He called this machine, 'the bomb'.

The bomb was used to secretly read the traffic from the German Enigma machines for several years.

In 1938 Germans added two new roters into the Enigma machine. This made it harder for the Poles to read the traffic

The Poles asked their allies, Britian and France to help them with the analysis and codebreaking of the German messages.

The British smuggle out the Enigma replica machines two weeks before Germany invaded Poland

The smuggled Enigma replicas were taken to the British code . and cypher school at Bletchley Park.

Alan Turing, a British mathematician at Bletchley Park thought of a different way of using the 'bombs' for testing the German codes.

Turing used 180 'bombs' which clicked round letter-by-letter, 20 every second, until they hit the correct one.

Hundreds of code breakers at Blechley Park worked round the clock to decipher the German Enigma communications they intercepted

In 1943, British engineer, Tommy Flowers, created Colossus

Colossus changed the way code breaking was done from electro-mechanical to electronic – it was the first modern day computer

Colossus could read paper tape at 5,000 characters a second.

The Allied work on codebreaking played a key role in victories such as D-Day. It shortened the length of WW2.

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