Notes sur la calibration

“It is suggested that channel 5 is used because the higher the frequency the easier it is to observe step changes in the output.” p.104 user manual

“Operating at a wider bandwidth increases range but also increases power consumption. The DW1000 has fine control of the TX pulse width allowing optimum control of transmitted spectrum bandwidth.” P.211 user manual

“In general to locate a mobile node measurements are needed to be referenced to a number of fixed known location “anchor” nodes. Typically a minimum of three anchor nodes are needed to locate a mobile node in two dimensions, while a minimum four non-coplanar anchors are needed to locate a mobile node in three dimensions. The spacing of anchors nodes in an installation has to be such that four anchors are always in communication range of the mobile tag no matter where it is within the operating space. The communication range is dependent on data rate and preamble length, the choice of which is influenced by the node density requirements and perhaps also power consumption.” P.214 user manual

Sum up :

To locate a mobile node, measurements are needed to be referenced to a number of fixed known location "anchor" nodes, typically a minimum of three anchor nodes are needed to locate a mobile node in two dimensions, while a minimum four non-coplanar anchors are needed to locate a mobile node in three dimensions. There are two general methods of doing location: time difference of arrival (TDOA) based location and time of flight (TOF) based location. In general, infrequent transmission of short packets is best for a long battery life. When a large quantity of data needs to be sent, it is best to employ the longest frame length, so that the overhead of the preamble and other parts of the frame header represents a smaller proportion of the overall frame. The text also provides techniques to save power in receiving, including low-power listening, which is a technique based on the DW1000 preamble sampling function, and the IC can "sniff" the air for a short period looking for a preamble, and if it does not see it, it returns to low power sleep mode.