The Making Of The Spitfire

3D Website componants and Animation.

The idea.

The user spins a fully animated scale
model of a spitfire. They are able to
select areas that they would like to find
more information on. A pop-up box
appears filled with content about that
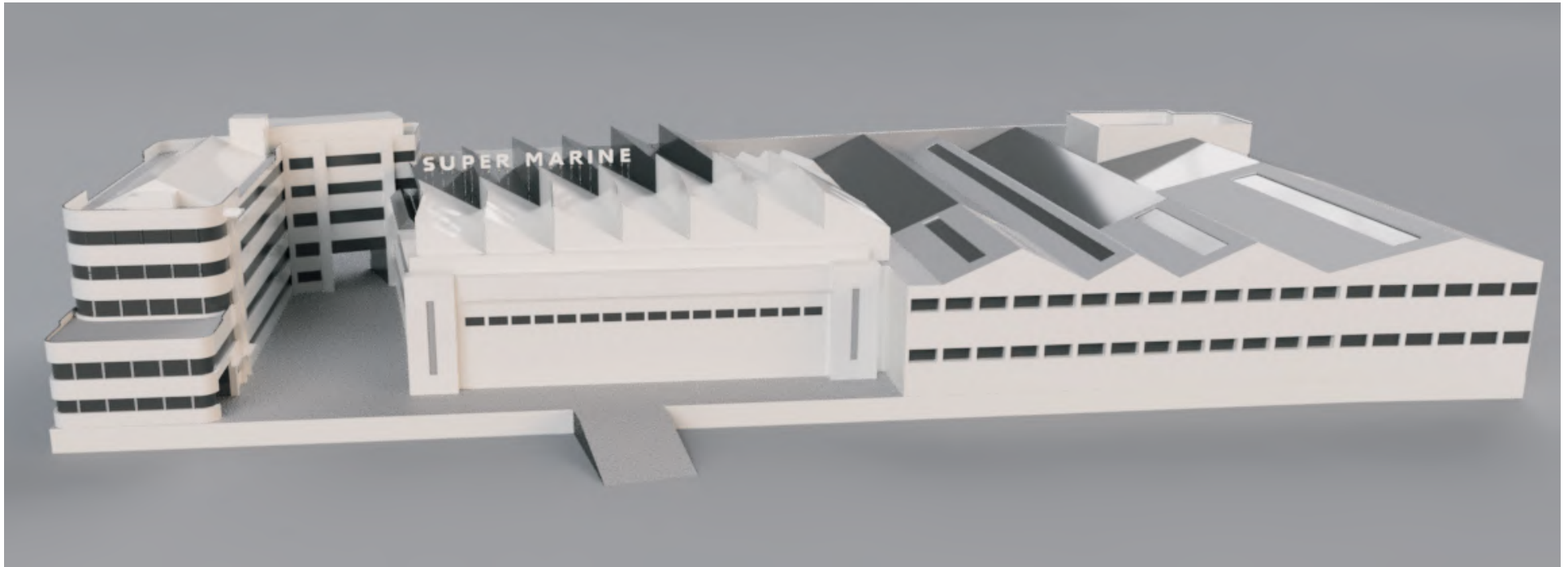section. The name, its origin,its
builders.

It's story.

The aircraft.

Accurate 3D models of the Supermarine Spitfire

The location.
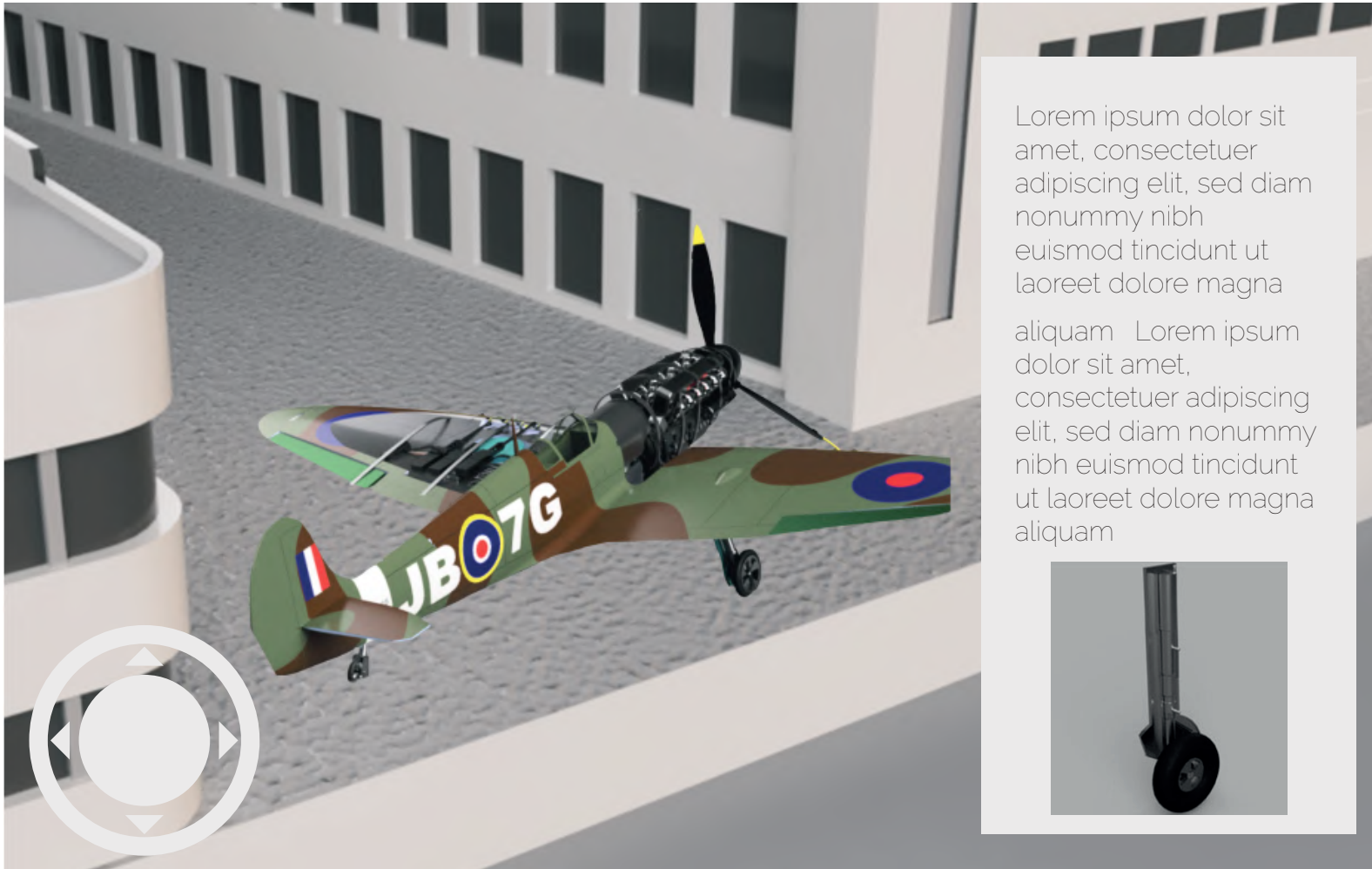
The Woolston Supermarine Works

The mechanics.

Unity WebGl and Html based rotating information system

Many variations

Spitfires used a variety of propellers during their time in service. By the end of the war, the Spitfire had been through 13 different designs.

At the very beginning, the prototype and the initial Mk1s that followed it had a wooden two-bladed, fixed-pitch prop, which was the standard of the time. Having a fixed-pitch rather limits the performance of the aircraft, similar to riding a bicycle with only one gear. The gearing you have with this is a 'one size fits all' compromise, allowing you to move off from standstill, and still reach a reasonable top speed. Having a variable pitch (or extra gear) means that for a given RPM, you can increase the thrust in the same way that changing up a gear drives the bicycle forward with greater force. In the aircraft this allows a shorter take-off run, and protects the engine from detonation – which you would experience in a car if you drove off in too high a gear. In the car it would take a long time to reach cruising speed, in the Spitfire you would run out of runway.

With the advent of the Merlin III engine the two-bladed wooden propeller was replaced by the De Havilland three-blade metal, two-pitch propeller, significantly enhancing performance, particularly in the climb.

Constant speed propellers
Early Rotol Constant Speed propellers had magnesium alloy blades, In 1939/40 they were aluminium bladed, switching to impregnated wood in late 1940/early 41, later they re-introduced some aluminium blades back into their range.

Wood makes a comeback

Combined.

A look at all of the componants together

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