

UK Dynamic Spectrum Access Functional Specification Working Group

within SPF Cluster 2

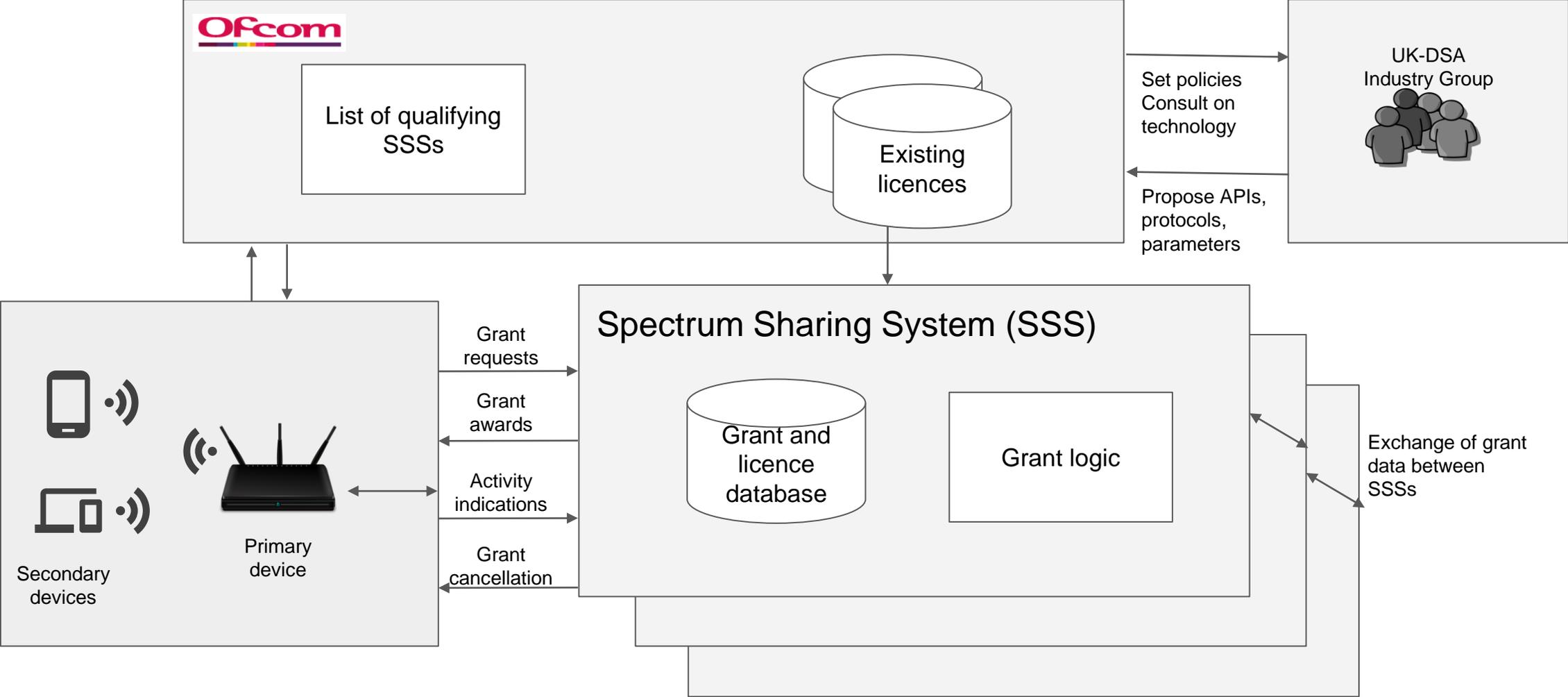
Proposed Principles for UK-DSA, v1.0

UK-DSA Design Aims

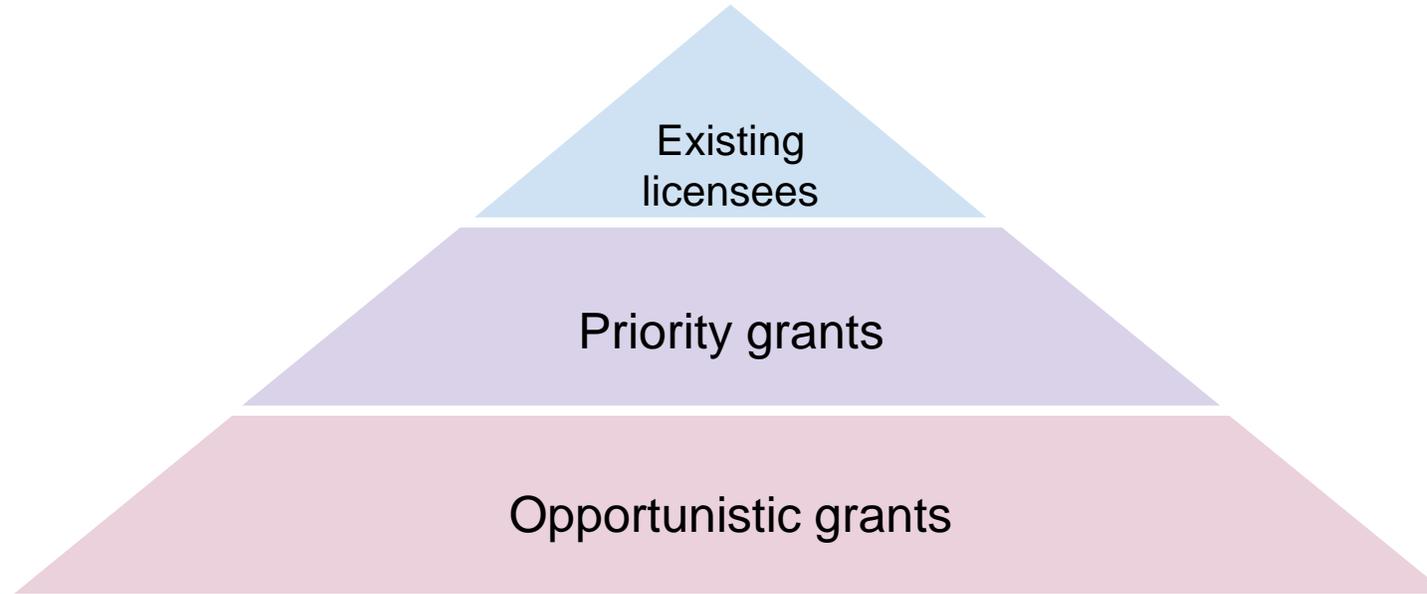
Proposed principle #1

- Support enhanced **spectrum efficiency** by granting access to spectrum where and when it is available **based on actual usage**, whilst respecting the rights of priority assignments, and reusing spectrum in local areas small enough to efficiently reuse it.
- Support for a **wide range of existing and new use cases** and business models.
- **Promote innovation** to the benefit of UK citizen-consumers **and** industry.
- **Reduced overheads** from the spectrum assignment process compared with manual assignment, minimising burdens and maximising scalability.
- **Greater visibility of spectrum availability** and **rapid access to spectrum**.

UK-DSA Architecture



UK-DSA Licence Types



- All “grants” are licences, automatically issued by a Spectrum Sharing System
- All tiers are optional, depending on the circumstances for each band, e.g.:
 - 3.8-4.2 GHz and 26 GHz likely all three tiers
 - 1.8 and 2.3 GHz likely Priority and Opportunistic
- The tiered structure does not imply a formally different licence class: just differing terms and rules on contention for each issued licence

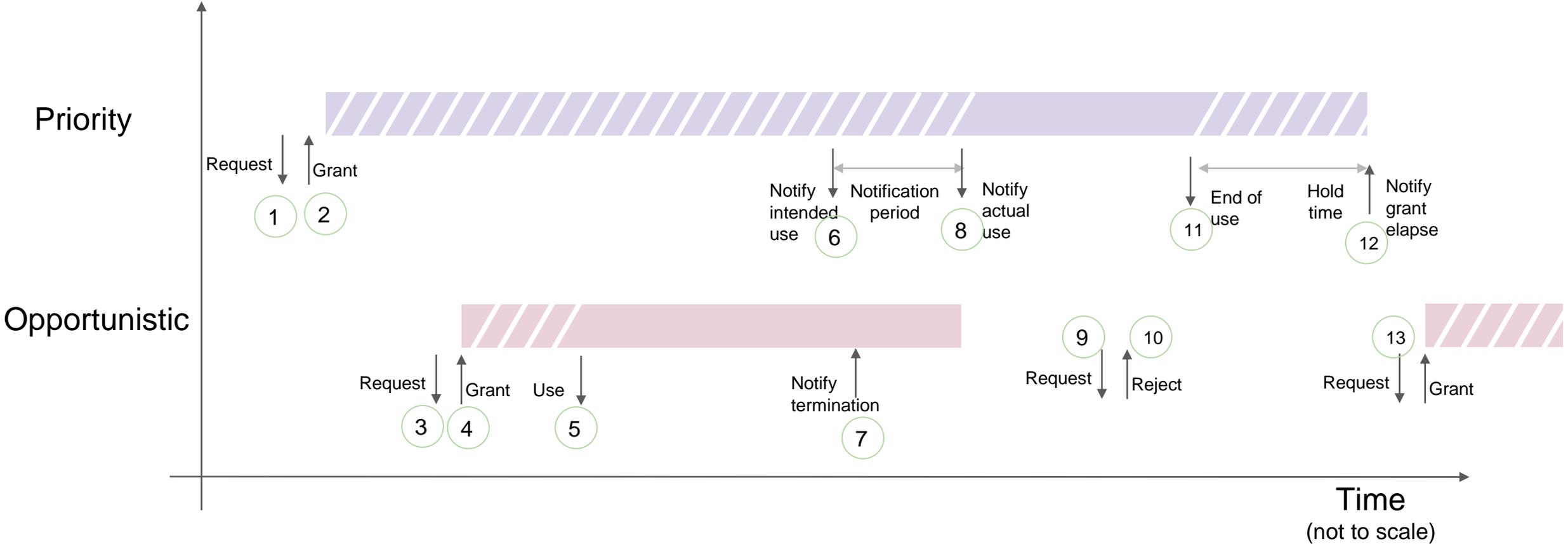
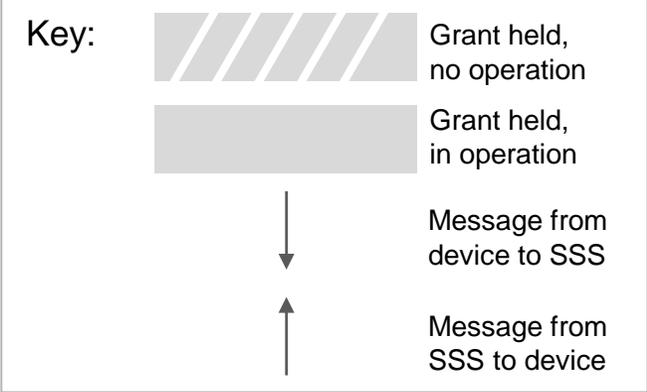
Summary of proposed principles - 1

- **Rapid introduction** - not predicated on demand for administrative licences #2
- **Common approach** to all shared mobile spectrum bands, but with parameters and rules adapted per band (and compatible with SPF 26 GHz recommendations) #3, #4
- **Fully automated**, capable of providing spectrum access grants (i.e. automatically issued licences) to equipment on request without human intervention #5
- **Multiple, commercially operated** Spectrum Sharing Systems, complying with Ofcom rules #6
- **Ofcom retains** full policy, monitoring and enforcement powers #6
- **Standardised protocols**, using (simplified) international standards to promote wide ecosystem #7
- **Two grant types** (plus existing licences) - both are automated licences: #8
 - Priority grants - with sufficient duration to promote investment certainty
 - Opportunistic - promoting spectrum efficiency and innovation

Summary of proposed principles - 2

- **Use it or share it approach:** opportunistic access available when priority grants not in use. #9
- **Contention rules** to adjust bandwidth allocation in case of contention (e.g. for 26 GHz) #11
- **Grant durations** sufficient for investment certainty while maintaining efficiency: variable by band and use case #10
- **Technical grant conditions** to protect other licensees (including grants as applicable) #12
- UK-DSA replaces interim administrative shared access licences #13
- SSSs **share relevant grant data**, while maintaining security and confidentiality #15, 16
- **Fees are a commercial matter** for SSS providers #17
- **UK-DSA industry group** sets technical standards compliant with Ofcom policies #18

Example operation



Illustrative only; not prescriptive of detailed protocol