Exclusive

- **Measurements** of $D/D^*/\Lambda_c$ /… **light lepton differential rates**

  (1D/4D if possible)

  - Unfolded information needed, but also provide migration matrices to preserve measurements.
    - A bit of a tragedy that we have so little to show after 10 years of B-Factories in terms of model-independent measurements :-/
- Know your backgrounds: Need **better measurements** of $D^{**}/\Lambda_c^{(**)}$
  - In **principle alternative way to see NP**; at least important and not very well known backgrounds
- **Lattice input beyond *w* = *1*** and QCD / light-cone sum-rule input
  - Important ingredient; offers way to constrain form factors that are ~ m_ℓ
    - **Two ways** to constrain these form factors: use **Heavy Quark Relations** (Bernlochner, Ligeti, Robinson, Papucci) or from **lattice / QCD & light-cone sum rules**
- Other channels should be explored
  - Belle II can do $B \to \pi \ell \nu$, LHCb can use its large samples of B_c etc.

Inclusive

- **Inclusive** measurements likely only possible at Belle II
  - But important cross check: if NP is present in D & D*, it should be also visible in $B \to X \tau \nu$ *or* $B \to X_c \tau \nu$.
  - Total ratio can be predicted reliably with OPE in terms of local heavy-quark operators
    - Phase space cuts more tricky; OPE can break down

- **Experimentally very challenging measurement**
  - No B-Factory result (yet)
  - **Composition of X_c** important as it impacts the signal and normalisation mode template (cf. D** from previous slide)
    - Also problematic: Missing modes (measured D+D*+D**(1P) do not saturate inclusive BF)