Monoid-Graded Monoids in $\mathscr{C}$

$(\mathsf{E},0,+)$

$\eta : \top \to M_0$

$M : \mathsf{E} \to \mathscr{C}$

$\mu_{e_1,e_2} : M_{e_1} \otimes M_{e_2} \to M_{e_1+e_2}$

Graded modalities are indexed-families of objects from one monoidal category to the another such that their tensor products are related in a lax or colax manner.