We will elaborate the notion of 'int-amplified' endomorphism f of a normal projective variety X, a property weaker than 'polarized' yet preserved by products. We will show that the existence of such a single f guarantees that every Minimal Model Program (MMP) is equivariant w.r.t. a finite-index submonoid of the whole monoid SEnd(X) of all surjective endomorphisms of X. Applications of the equivariant MMP are discussed: Kawaguchi-Silverman conjecture on the equivalence of arithmetic and dynamic degrees of an endomorphism, and characterization of a subvariety with Zariski dense periodic points. Some parts are based on joint work with Meng.