One of the major outcomes of the Rosetta and Philae investigations is the unexpected high “dust”/ice ratio, in which “dust” is dominantly constituted of carbon-rich grains (“organics”). They constitute the matrix in which minerals and icy grains are trapped: instead of being “dirty ice balls”, comets would better be quoted “ORGANiCeS”. To which extent is this feature generic, within the solar system and beyond? Is the composition of these grains to be expected similar wherever a molecular cloud collapses and star forms, or would it result from the highly specific dynamical evolution of the protosolar disk? Supposedly the transition between this complex chemistry and living structures, results from a suite of autocatalytic selection reactions when such grains fed standing bodies of liquid water at Earth surface, what is the degree of “enabling contingencies” (e.g. temperature, pH, cations, catalysts…) which made Earth “habitable”, and would challenge the likelihood that it happened elsewhere, forcing a fundamental revisiting of what “habitability” requires and… means? We shall discuss the relative importance between genericities and contingencies within the processes shaping the evolution of “terrestrial” planets, as a frame in which Rosetta and Philae results should be inserted.