the periodical creation of new audio systems (the "what"), sometimes under pressure from the advent of new technologies, such as the CD as a carrier of digitized music (the "how"). Then the existing frame, the proposition that brilliance in sound and modernist aesthetics would satisfy its high-end customer base, came under pressure from the trend toward built-in audio systems. They subsequently reframed and sought ways to convey their sophisticated aesthetics through the customer's interaction with the (invisible) music source ("frame"). But while they were still experimenting with how they could deliver within this new frame, the desired functionality and value proposition changed. Music became a mobile, social medium, and the purist appetite for high audio quality waned (a shift in needs, demanding a new "outcome"). This shift meant that Bang and Olufsen had to reframe again, taking their quality brand away from interaction to become a service provider in the new music industry network (again a new "frame"). Bang and Olufsen's overcoming all of these problems in such a short period of time is exceptional; lesser companies would have given up a long time ago. Their experience illustrates that there are five different levels on which frame creation can be enlisted to drive innovation (see also Dorst 2011, and figure 6.1).

1 THE ROUTINE REACTION

Organizations often initially react to a change in their context in a way that requires the least effort and the fewest resources: they set out in a conventional problem-solving manner (through normal abduction; see chapter 3) to create a new "what" that will save the day while keeping the "how," the frame and the "outcome," constant. We have seen in the examples above that this is also often the face of the problem situation as it is first presented to a designer, implicitly framed by the client organization (Paton and Dorst 2011). This "staying within the frame" is seen as a good, low-risk strategy. It is the fallback position for many organizations. But taking this route is a strategic choice, like any other, and it should be done deliberately and thoughtfully, after a thorough analysis of the problem situation and its possible dynamics over time. Just sticking naively to this default strategy entails huge risks. The first lies in the fact that frames are full of assumptions about the way the world works. These assumptions can be deeply hidden in the discourse that sits behind the frame, and are thus engrained in the very terms that are used to think about the issues. This prestructures the problem situation—unquestioned frames can be complete thought worlds, with their own sense of rationality and a strong