The tremendous pace of advances in robotics and artificial intelligence leads to a rapid penetration of digital technologies across all industries. In developed countries the debate whether new technologies cause job and wage losses for the existing workforce is still ongoing, as empirical evidence on the impact of digital technologies on individual workers is sparse. We analyze the effect of investments in digital technologies on individual workers. Using a novel linked employer–employee data from Germany that contains firm-specific measures of technological upgrading, we estimate the impact of digitalization on workers in terms of employment stability and wages. We find little change in employment stability. Investments into 4.0 digital technologies do not expose individuals to higher likelihood of separations from their initial employment. Depending on the degree of automation of the technologies, we find heterogeneous wage effects. Investments into latest digital technologies are associated with positive wage increases whereas investments into conventional technologies lead to wage losses for the existing workforce. Individuals conducting routine intensive occupations are most likely to remain employed in firms not using any digital technologies, however, those individuals gain the largest wage premia for occupational switches within firms. Our results illustrate the need for internal training and lifelong professional development to ensure that all workers can keep pace with technological progress.