Marketing budget decisions are critical and should be fact based rather than intuitive. Profit can be improved by better allocating a fixed budget across products or regions. The Excel-based decision support model presented in this article makes it possible to determine near-optimal marketing budgets and represents an innovative and feasible solution to the dynamic marketing allocation budget problem for multi-product, multi-country firms. The model accounts for marketing dynamics and a product’s growth potential as well as for trade-offs with respect to marketing effectiveness and profit contribution. It was successfully implemented at Bayer, one of the world’s largest firms in the pharmaceuticals and chemicals business. The profit improvement potential in this company was more than 50 % and worth nearly EUR 500 million in incremental discounted cash flows.