deviations have been identif ed. As outlined above, however, especially now in times of the COVID- 19 crisis, diagnostic controls do tend to hit the wall. The main problem is that the level of perceived uncertainty is quite high, which makes it dif cult for top managers to know what reasonable objectives are or how realistic it is to achieve certain targets that were set before the crisis. Thus, especially in uncertain times of crisis, top managers tend to struggle with formulating clear and unambiguous performance expectations for their employees. If they try and employees feel that the objectives are unreasonable (especially if top management focuses too much on short-term f nancial results), it might create tensions and spark conf ict. This can add another layer of complexity to an already dif cult COVID- 19 crisis.

It is therefore critical to complement diagnostic controls with interactive controls. The role of these systems is to trigger organizational learning through debate and dialogue. Interactive controls focus explicitly on strategic uncertainties and hence the main assumptions underlying an organization's strategy. They try to capture senior managers' perceptions of those contingencies that might invalidate the current strategy. In other words, interactive control systems are crucial for identifying not only how a current crisis might af ect an organization's strategic objectives but, in the f rst place, for detecting potential crises. The idea is to develop a profound understanding of these contingencies and to use this knowledge to adjust the strategy accordingly. Simons (1995) provides detailed guidance on how to set up interactive controls: Ideally, only one system (e.g. a sales analysis or a balanced scorecard) should be used interactively. The information this system creates should then be a recurring topic on higher-level managers' agendas and regularly brought to the attention of operating managers at all organizational levels. It should be discussed in face-to-face meetings

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to dissent' as well as trust each other. The discussions should focus not only on current information but also on forecasts of future states including dif erent scenarios.

In contrast to the mechanically functioning diagnostic controls where employees are confronted with pre-def ned targets and plans, interactive controls provide employees with opportunities to be involved in formulating new strategies. Since interactive controls give employees an active role in tackling a crisis they can be seen as an empowering element in the overall management control infrastructure and the management of the COVID-19 crisis. But there is a further enabling aspect that should not go unnoticed. Due to their interactive nature and focus on face-to-face meetings, interactive control systems can allow top managers to account for the emotional dimension of management control. The COVID-19 crisis can lead to performance-related stress, insecurity, frustration and even anger. Interactive control systems bring together dif erent views and opinions and enable managers from dif erent functions to develop compromises that lead to more widely accepted control strategies in organizations. Our research shows that such social forms of control play a crucial role for the development of f exible strategies that take into account current circumstances without compromising the deeply rooted and long-lasting values and beliefs of an organization (Carlsson-Wall et al., 2020). However, a particular challenge during the COVID-19 pandemic is that interactive control can in many cases not be performed through face to face meetings due to the social distancing requirements. Organizations hence need to learn to utilize digital means to enable meaningful organizational debate and dialogue and to engage employees in discussions about strategic uncertainties, their consequences and appropriate actions to address them.

In the process of f nding a balance between diagnostic and interactive control systems and skillfully using digital means to account for the emotional dimension of MCS, CFOs and business controllers play a critical role. Those actors often rely on diagnostic controls like traditional budgets and, even more, gain legitimacy through these systems. Business controllers, for instance, often f nd satisfaction in identifying negative deviations from targets and reporting those to senior management. This, however, demotivates operational managers and leads to inter-departmental conf icts. Thus, not only in times of crisis, controllers need to rethink their role and rather than relying on diagnostic controls and short-term f nancially oriented results need to support interactive controls in their organizations. Business controllers need to broaden their scope and f nd ways to proactively contribute to organizational learning but also to encourage and enable others to do the same. Thus, in times of the COVID-19 crisis controllers have to even more than usual take their business partner role serious and help managers from dif erent functions and on dif erent organizational levels to tackle an uncertain future and to develop reasonable strategies that – despite the urgency to secure the f nancial results – do not sacrif ce the expectations of key stakeholders.

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