Table 4.6 The CLAIMS of DevOps models

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| **NO.** | **CLAIMS ABOUT DEVOPS MODELS AND FRAMEWORK** | **QUESTIONS** |
| 1 | **MODEL: CS1 – R1** "The boundary between a model and a framework is fuzzy. A standardized format for organising, managing, and planning new development projects is the software lifecycle model. It might be accompanied by a budget. There is a wide choice of models for practically all areas of endeavours. A software lifecycle framework greatly overlaps the 'model' to a considerable extent but takes the project to more detail.  We adopt "Scaled Agile Framework" (SAFE) for our forthcoming DevOps Implementation project. This goes in fine detail into each of the key requirements of the users - both initially and with flexibility throughout the entire product life cycle. Ongoing maintenance is also an important aspect".  **RG3 – R10 “***First let’s start by defining the terms model and framework with respect to software development. A model refers to a representation of a system, process or concept. It can be a conceptual model, mathematical model, or a physical model. A model is often used to simulate, predict or analyze the behavior of a system. On the other hand, a framework is a collection of libraries, modules, and tools that provide a structure for developing software applications. A framework defines the conventions, protocols, and standards that developers must follow when building software. It also provides pre-built components and features that developers can use to speed up the development process”.* ***CS2 – R4*** *“In summary, a model represents something, while a framework provides a structure for building something”.*  ***CS3 – R5 “****A model may be a representation of requirements in software, for instance there is model representing our organization financial transaction. But a framework is a system that provides tools and behavior for specific purpose and enables you to construct your own solution on top of it. For example, our java multi-tier web application is built on top of the spring booth framework”.* | **Q1** What is the basic difference between model and framework in software development? **Q1b** How would you instantiate their use case in your organization. |
| 2 | **CS4 – R9** “The use of model or framework does not make us throw caution into the wind. The purpose of having a model or framework is so you can be abstracted away from the heavy lifting and focus instead in your business specific logic. However, ***framework is adopted because it enforces best practices for maintainable code, provide structure consistency for better teamwork. They are usually well tested, which give you a foundation well suited for DevOps adoption:***  Additionally, they frequently include libraries and ready-to-use components for typical tasks, which will almost always make you more productive. Beside all the benefits, there could be some drawbacks.  Your ability to think outside of a framework may be constrained. If you pick the wrong framework, you can find yourself spending more time finding workarounds since it hinders you more than it helps.  In simpler tasks, a framework might introduce pointless overhead. So, using a framework or model will depend on your team, the requirements, and the type of projects you are working on”. | **Q2** What limitations surrounds the use of models and frameworks? |
| 3 | **CLAIMS:** that DevOps frameworks have provided their respective organizations with effective strategies and best practices to streamline collaboration, automate processes, and achieve continuous improvement. The ones enumerated below are not present in the literature:  **CS**5 **– R11** “We use **The Three Ways framework**, which was first mentioned in the book "The Phoenix Project". It emphasizes the fundamental ideas of flow, feedback, and continuous learning. Our focus is on optimizing the entire value stream, reducing waste, and fostering a culture of collaboration and improvement”.  All Respondents **- DevOps Kanban** provides a descent visual board that helps us organize and monitor our work flow in a DevOps context. This framework is based on the Kanban principles, it encourages openness, restricts work-in-progress (WIP), and this because the focus was to empower teams to set priorities, spot bottlenecks, and streamline processes.  **Site Reliability Engineering (SRE): CS6 – R12** admitted that for them SRE is not exclusive to DevOps. “We frequently incorporate it into our DevOps practices. We were concerned with preserving the performance, scalability, and reliability of our systems. It creates and manages highly available and effective software systems by fusing operational knowledge with the principles of software engineering”.  **CS7-R14** agreed to implementing **Scaled Agile Framework (SAFE)** despite being primarily an Agile framework. “Our organization is somewhat large so SAFE offers extensions for DevOps that provide guidance on integrating development and operations practices at scale. It enables our large organizations to implement DevOps principles while maintaining alignment across multiple teams and projects”.  All Respondents. The DevOps performance within an organization is measured and evaluated using the research-based approach called**DevOps Research and Assessment (DORA).** “To assess the effectiveness of our DevOps practices and identify areas for improvement, we leverage Dora to define key metrics such as lead time, deployment frequency, change failure rate, and mean time to recover (MTTR)”. | **Q3** Are the framework and models from the literature sufficient? **Q3b** If no, could you please mention the ones you have adopted or want to adopt? |