

Flexibility and Adaptability

Veterinary Management Implementations

Demonstrating and implementing the VM module of Elements for our clientele has illuminated an interesting reality of research animal health management. Different vet teams at various customer sites take *very* different approaches to recording and tracking their animals' health!



We're familiar with the necessary variation between IACUC's, as each has its own protocol forms and variations on the review process. The same is sometimes true for facility management functions as well, impacting Census and Billing data. But nowhere is there greater variation than in the management of animal vet records. Fortunately, the Veterinary Management module has been built to be incredibly flexible—both in the type of data captured and the processes used to collect it.

Building a structurally flexible system is always a tradeoff. As the built-in flexibility increases, the amount of necessary setup and configuration also increases. If the developer is not careful, a system that is very customizable can become more difficult to generate reports from. It can even make it more difficult to demonstrate the system to interested customers! We believe that within the TOPAZ VM module, we have achieved an effective and productive balance of these factors.

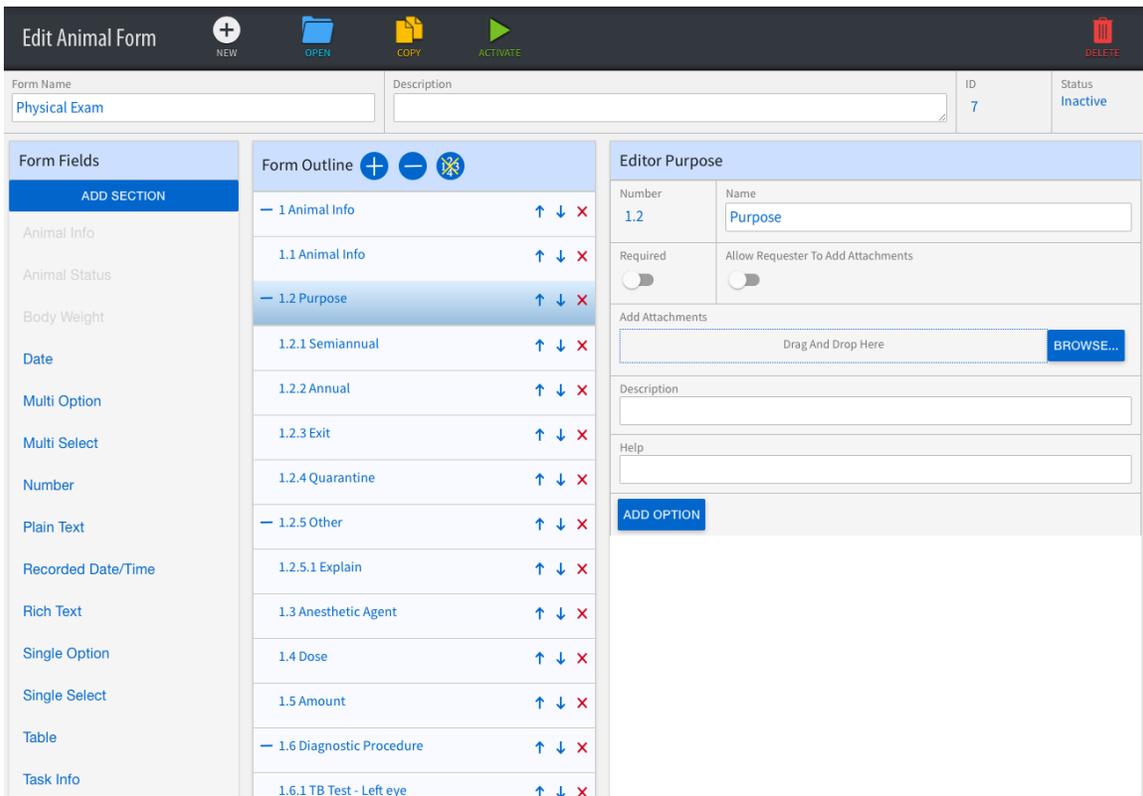
The range of data collected by VM users varies from simple "status" updates ("you asked me to do something, and I just did it"), through to more complex forms, containing multiple fields with intelligent branching. Customers use the module to track everything from cage overcrowds, routine procedures like TB tests or worming, and health issues and treatments, to full records of surgeries or physical exams, complete with anesthesia records, pre and post-procedure tracking, and recovery data.

The screenshot below displays a sample list of task templates based on customer data.

Name	Active	Task Type	Animal Type	Result Entry Type
Anesthesia	Yes	Procedure	Identified	Form
Blood collection request	Yes	Procedure	Identified	Form
Bodyweights	Yes	Observation	Identified	Grid
Dead Animal Notice	Yes	Study / Exp...	Identified	Form
Health Concern	Yes	Health	NonIdentified	Status
Health Concern - DAC Treatment	Yes	Treatment	NonIdentified	Status
Health concern - PI Treatment	Yes	Health	NonIdentified	Status
Health Notification	Yes	Health	Identified	Form
Inoculation	Yes	Procedure	Identified	Form
Overcrowding - Split	Yes	Routine	NonIdentified	Status
Physical Exam	Yes	Procedure	Identified	Form
Red Card	Yes	Health	Identified	Status

The system is able to accommodate a wide variety of data preferences and processes, due to its flexibility in allowing users to define their own data collection strategies for each “task type” they wish to capture in the system. Thus, to simply record the fact that a cage is overcrowded, one may use a “status” type task in the form of a simple flag. For a task that involves a few pieces of data collected for multiple animals (such as recording bodyweights for a room of animals), users can design their own data collection *grids*. For tasks that involve a lot of detail and are performed “animal by animal”, like physicals, surgeries, etc., users can customize their own data collection *forms*.

The screenshot below displays the Form Designer and features a Physical Exam form from a customer implementation.



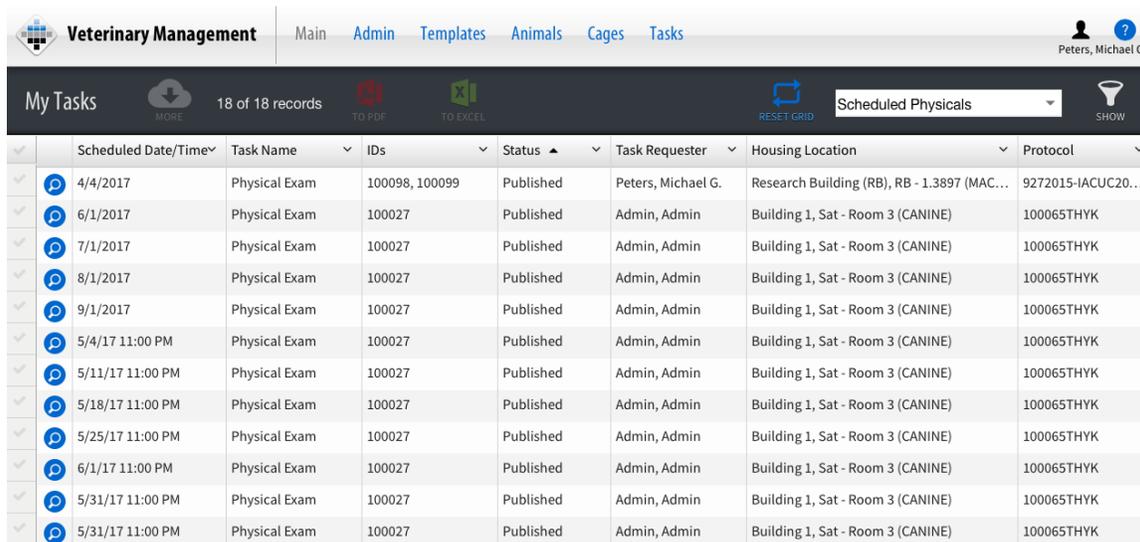
The screenshot shows the 'Edit Animal Form' interface. At the top, there are navigation icons: NEW, OPEN, COPY, ACTIVATE, and DELETE. Below these are input fields for 'Form Name' (Physical Exam), 'Description', 'ID' (7), and 'Status' (Inactive).

The main area is divided into three panels:

- Form Fields:** A list of field types including Animal Info, Animal Status, Body Weight, Date, Multi Option, Multi Select, Number, Plain Text, Recorded Date/Time, Rich Text, Single Option, Single Select, Table, and Task Info. An 'ADD SECTION' button is at the top.
- Form Outline:** A tree view of the form structure:
 - 1 Animal Info (collapse, expand, delete icons)
 - 1.1 Animal Info (collapse, expand, delete icons)
 - 1.2 Purpose (collapse, expand, delete icons)
 - 1.2.1 Semiannual (collapse, expand, delete icons)
 - 1.2.2 Annual (collapse, expand, delete icons)
 - 1.2.3 Exit (collapse, expand, delete icons)
 - 1.2.4 Quarantine (collapse, expand, delete icons)
 - 1.2.5 Other (collapse, expand, delete icons)
 - 1.2.5.1 Explain (collapse, expand, delete icons)
 - 1.3 Anesthetic Agent (collapse, expand, delete icons)
 - 1.4 Dose (collapse, expand, delete icons)
 - 1.5 Amount (collapse, expand, delete icons)
 - 1.6 Diagnostic Procedure (collapse, expand, delete icons)
 - 1.6.1 TB Test - Left eye (collapse, expand, delete icons)
- Editor Purpose:** A configuration panel for the selected '1.2 Purpose' field. It includes:
 - Number: 1.2
 - Name: Purpose
 - Required:
 - Allow Requester To Add Attachments:
 - Add Attachments: A 'BROWSE...' button and a 'Drag And Drop Here' area.
 - Description: An empty text input field.
 - Help: An empty text input field.
 - ADD OPTION button

For each of these approaches, the tasks may be pre-scheduled (allowing an individual to use the VM module as a “task management and assignment” tool), or can be performed “ad hoc”. For any of the tasks that users define, email triggers can be setup to easily keep other staff informed, such as PI’s or vets.

The screenshot below displays the My Tasks Dashboard, filtered to display scheduled Physical Exam tasks.



Scheduled Date/Time	Task Name	IDs	Status	Task Requester	Housing Location	Protocol
4/4/2017	Physical Exam	100098, 100099	Published	Peters, Michael G.	Research Building (RB), RB - 1.3897 (MAC...	9272015-IACUC20...
6/1/2017	Physical Exam	100027	Published	Admin, Admin	Building 1, Sat - Room 3 (CANINE)	100065THYK
7/1/2017	Physical Exam	100027	Published	Admin, Admin	Building 1, Sat - Room 3 (CANINE)	100065THYK
8/1/2017	Physical Exam	100027	Published	Admin, Admin	Building 1, Sat - Room 3 (CANINE)	100065THYK
9/1/2017	Physical Exam	100027	Published	Admin, Admin	Building 1, Sat - Room 3 (CANINE)	100065THYK
5/4/17 11:00 PM	Physical Exam	100027	Published	Admin, Admin	Building 1, Sat - Room 3 (CANINE)	100065THYK
5/11/17 11:00 PM	Physical Exam	100027	Published	Admin, Admin	Building 1, Sat - Room 3 (CANINE)	100065THYK
5/18/17 11:00 PM	Physical Exam	100027	Published	Admin, Admin	Building 1, Sat - Room 3 (CANINE)	100065THYK
5/25/17 11:00 PM	Physical Exam	100027	Published	Admin, Admin	Building 1, Sat - Room 3 (CANINE)	100065THYK
6/1/17 11:00 PM	Physical Exam	100027	Published	Admin, Admin	Building 1, Sat - Room 3 (CANINE)	100065THYK
5/31/17 11:00 PM	Physical Exam	100027	Published	Admin, Admin	Building 1, Sat - Room 3 (CANINE)	100065THYK
5/31/17 11:00 PM	Physical Exam	100027	Published	Admin, Admin	Building 1, Sat - Room 3 (CANINE)	100065THYK

While the software may feature endless flexibility and customize-ability, it is still capable of analyzing data and producing useful output. The VM data is accessible from within the TOPAZ Reporter module, starting with release 4.3 in Q2 of 2018. This tool will allow you to analyze health trends, spot issues, and even design animal dashboards to alert you to weight loss trends.

While the implementation of the VM module does require some initial effort, the ultimate return is a valuable module that collects the exact data you desire, using processes that are efficient for your specific needs and users. To help with the implementation, one of our Project Services project managers will: 1) Work with you to analyze your current data and processes and map them to VM, 2) help you set up your desired templates, and 3) effectively train your staff. We even offer customized training guides and/or videos that you can utilize with your vets, vet techs, and animal care staff to ensure a seamless transition.