

# Managing Risk

Systems Planning for Outdoor Adventure Programs

Chapter Excerpt Only



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## Chapter 2 – Equipment Management System

The Equipment Management Systems is intuitive, simple and concrete. All existing adventure companies or educational programs have at least a loose equipment ‘system’ in place already, allowing for easy reference for the material below.

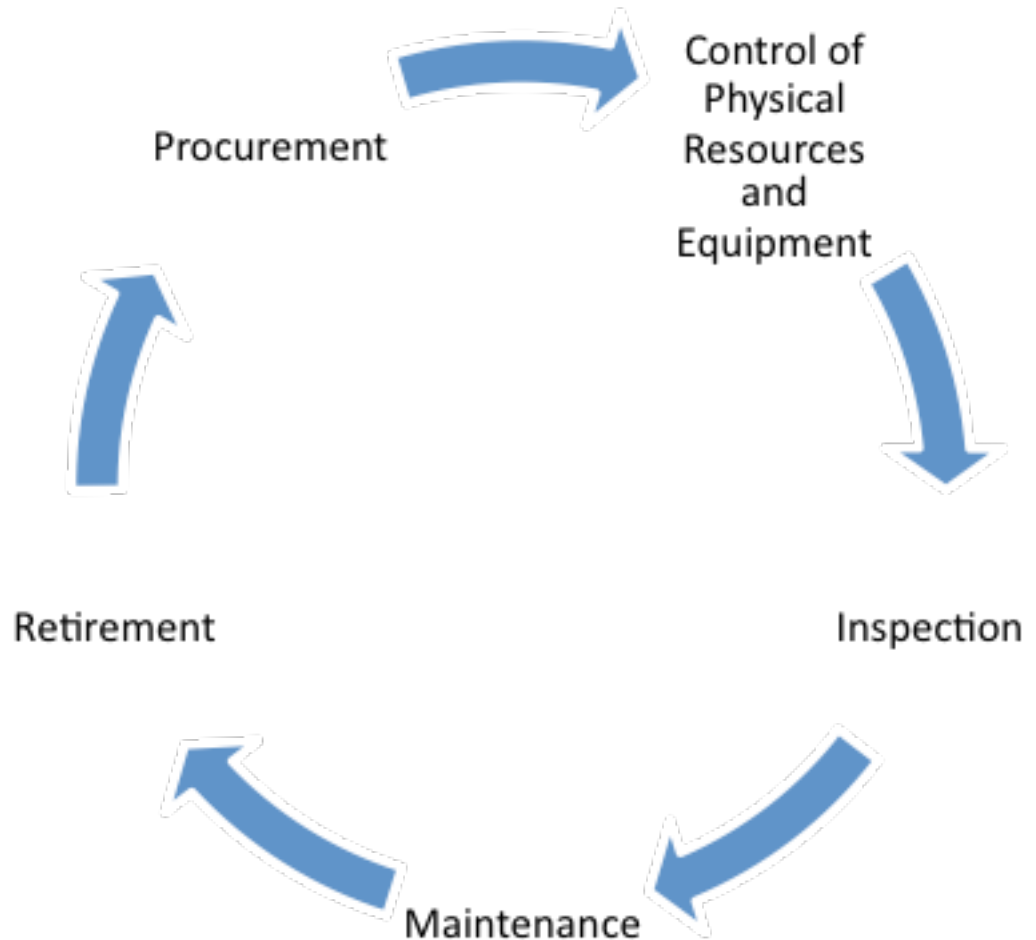
Having said that, the relative value of equipment to the cost of a trip or program and therefore to the financial success of any operation varies widely across the adventure industry and outdoor education fields.

Beyond the direct gear required to participate in an activity, there is also ‘behind the scenes’ equipment, such as emergency and rescue gear, communication devices, food storage bins and coolers, and maps. Even behind that are tools to fix gear, office equipment to keep the trips and organization running, and vehicles to get the programs into the field. Yet another layer represents land and buildings. This system addresses all of the physical goods that are required to run a business, be they pencil sharpeners, backpacks, \$50,000 vehicles, or \$500,000 lodges. The term ‘equipment’ will be used most often in the material to follow, but does not limit the scope of the system and concepts behind. It applies equally to infrastructure and other physical resources.

Clearly, a company with a great deal of money tied up in inventory for trip gear or physical assets to assist in logistics and operations will (and must) direct considerable energy into managing it. A fleet of vehicles or accommodations would likely represent a large portion of the net worth of the company. More commonly, though, we are seeing companies use physical goods as a marketing advantage. Being able to provide ‘the best’ or ‘newest’ is a means of differentiating oneself in a crowded market place. Regardless, an equipment system that ensures that the right infrastructure and equipment is at the right place at the right time is the minimum; delivering what is contractually promised. Ideally the system

**FIG. 1**  
**THE EQUIPMENT**  
**MANAGEMENT CYCLE**

*The purpose of this system is to ensure that infrastructure, physical resources and equipment are in place to safely deliver quality programs and activities.*



assists in creating products that exceeds customer's expectations.

Figure 1 outlines the Equipment Management Cycle. By looking at each phase of the cycle, an effective system can be created. This chapter outlines the systems thinking 'conceptual model'.

### **Procurement:**

Within the life cycle of any one piece of equipment, procurement or purchasing is the obvious place to start. Particular 'big picture' issues need to be considered before getting into the nuts and bolts of making procurement work within an equipment management system, and in its role in the delivery of a product through the core process.

### Particular issues to consider in systems planning:

**Trigger** an event or indicator imbedded into a system that automatically signals the need for a follow up action.

For a small owner/operator business, the equipment management system is very simple. Since the person organizing and guiding the trips is the same person who is storing the gear (and running the business, for that matter), procurement decisions are uncluttered: a need is identified; the equipment is purchased.

In a large organization, procuring equipment may include a purchase order or requisition form, a tendering process soliciting bids, a committee to make a final decision, a senior manager authorizing the purchase, and a finance department to arrange payment. The people making the final decision are not the people who will use the item, therefore urgency and relative importance of any one item is reduced, not to mention the cumbersome paper trail and time lag in this process.

Likely, most adventure operations fall somewhere in between these two examples, but what they have in common is a trigger to indicate additional equipment is needed.

A trigger could be a quantity, such as a low inventory number that signals an order to obtain more; or after an item has been repaired a set number of times it is retired and replaced.

The trigger could also be a human factor, such as a guide perceiving the need for a piece of gear that would make an activity safer, or someone taking reservations

#### **KEY IDEA**

**The greater the value of equipment to the company's financial or marketing success, the more thorough and comprehensive the equipment management system needs to be.**

in the office perceiving the need for a piece of equipment that would make the job easier or more efficient.

These are three different types of purchases, and an Equipment Management System must account for each.

Replacing existing inventory – replacement purchasing – fills a proven need. When inventory falls below a certain level, be it for canoe paddles, first aid gauze, printer paper, or brochures, the trigger creates a purchase order (either literally or figuratively). The decision to purchase the replacement item is routine, often scheduled, and done with minimal decision making. Without a pre-set trigger, inventory would have to run out (or run too low to be able to run a trip), before it would be noticed, and then it would be too late to effectively manage the situation. In such a case, either trips go without and compromise safety and quality, or else emergency last minute purchases hurt the company's bottom line.

Replacement purchasing is typically done at the supervisor or field level, some-

times coming from ‘petty cash’, a small budget set aside for this express purpose, or on account with a supplier. Ideally, this budget rests in the hands of those who will use and notice the items need replacing, reinforcing the impact of using and losing equipment.

The other type of purchases are considered capacity building purchasing. Perceiving that a certain piece of gear could make a trip safer or make an office run smoother in effect increases the capacity of the operation – it is now able to run better programs or accomplish more within the same parameters. This trigger is more subtle, and relies on an individual to recognize a problem, come up with a solution, and feel compelled to act on it. This is closely tied to workplace culture, employee’s sense of ownership and pride in their work, and management’s attitude towards change and improvement. For all of these reasons, this trigger – perceived need – is valuable but unreliable.

Other triggers can exist that do the same thing. By looking at the other systems within the core process, triggers can be identified that spin out to the Equipment Management System. Tracking and analyzing near misses can incorporate a trigger that would indicate when improved or different equipment is needed, or a feedback mechanism in the Client Information System could do the same. By identifying and highlighting triggers that interact with the Equipment Management System, capacity building opportunities can be identified that will improve safety or increase product quality.

The decision making for capacity building purchases typically lies at the mid and upper levels of an organization, as it is a new and unique acquisition that is not likely budgeted for in advance. For these reasons, capacity building purchases are usually slower to implement. At its worst, a slow response time misses the opportunity for improvement, as staff find other ways to accomplish the same goals, perhaps with less efficiency or effectiveness. Conversely, every good suggestion can’t be implemented nor ‘next best thing’ purchased. Financial realities must be balanced with safety procedures and improving the quality of programs.

A third family of purchasing and procurement exists: product development investment. This is the bigger brother to capacity building purchasing. While capacity building finds ways to do more within the same parameters, product development investment expands the parameters. The decision to purchase more boats, another vehicle, a storage garage or a classroom facility are truly investments – purchases with the specific goal of increasing long term viability and/or profitability. These decisions clearly reside at the top levels of an organization, and are considered ‘strategy’. They are discussed in detail in the Business Management System chapter.

*THAT REALLY HAPPENED!*

*STOVE FUEL WAS NOT IN STOCK WHEN PACKING FOR A TRIP, SO THE GUIDES DECIDED THEY WOULD PURCHASE IT ON ROUTE TO THEIR REMOTE TRAILHEAD. RATHER THAN THE \$3 PER GALLON BULK RATE THEY GET AT THEIR HOME BASE, THEY PAID \$12 AT THE LAST CHANCE GAS STATION! THEY NEEDED NINE GALLONS, SO SPENT \$108 MORE THAN IF AN INVENTORY TRIGGER HAD BEEN IN PLACE.*

A separate but related issue within procurement of equipment within this system is planned versus unplanned and funded versus unfunded purchases.

Routine replacement purchasing is often planned, and can therefore be budgeted. Some replacements, though they can be anticipated, are not planned. For example, wrapping a whitewater canoe around a rock is foreseeable; however programs rarely 'plan' to lose a canoe, nor does it necessarily have a budget set aside to replace it. These unplanned replacement purchases must be made in order to keep the trips running, so the next question is where does the money come from? Having an immediate funding source has to be considered – a credit card, line of credit with a bank, an account with a supplier – which marks an intersection with the Crisis Management and Business Continuity System. Decisions on funding sources are also tied to insurance coverage; deciding what is 'claimable' and what an organization is prepared to cover themselves. This is covered in detail in additional systems below.

### Control of Physical Resources & Equipment:

Physical resources and equipment control refers to who has access to what. Keep in mind the widest definition of 'physical resources', and include with outdoor gear vehicles, tools, computers, and buildings. From the business manager's perspective, this is the crux of the equipment cycle.

#### Particular issues to consider in systems planning:

Inappropriate equipment control sees the wrong people using the wrong gear, safety concerns, damage and maintenance headaches, loss and theft, and all of the time and cost associated with these.

Accurate inventory records are the foundation of equipment control. For no apparent reason, adventure operations have extreme difficulty keeping accurate inventory records. Considering that for many small businesses their infrastructure and equipment represents nearly all of their assets, this is concerning.

Standard operating procedures usually has inventory taken at the start and end of the operating season. Ideally, the replacement purchases during that time and retired gear has been added and subtracted, respectively. Even if it has, there will still be a difference between the two inventories – the general losses to accident, theft, or complacency. With such a wide window between the two inventory counts, it is impossible to isolate when and where the losses are taking place.

This is important to know. Replacing equipment is expensive; in time, money, and stress on other systems delivering the core process. If losses are happening on

#### *NOTES FROM THE FIELD:*

*HAVE EQUIPMENT CUSTOM MARKED AT THE FACTORY – EMBROIDERED, LABELLED, OR COLOURED. THE EXTRA COST PAYS BACK IN EASE OF CONTROL, THEFT DETERRENCE, AND PROFESSIONAL LOOK.*

#### Target Market

<definition to come>

trips or during programs, one has to ask how it is being compensated for – what other systems are being compromised? There may be gaps in staff training or client instructional progression leading to damaged or lost gear, and safety could be compromised. If losses are happening in storage; access, shelter and security are need to be addressed. Systems thinking requires more than having a generous budget to cover the losses. Tracing back the sources of loss is critical to having integrated systems, and financially successful operations.

Inventory control needs to be more than a biannual count. Many operations have some form of trip gear sign out sheet (and sign in). They are adopted with varying levels of success, but regardless this information is rarely accounted to the overall inventory. Ensuring that these trip reported losses are tracked and consolidated is the first step in tracking loss and keeping accurate inventory count. The same trip gear sign out can be extended to all forms of physical resources.

Having an equipment manager, or one person in charge of the big picture, makes a difference. This person can track trends in damage or loss, unseen by individual guides or instructors. The losses may be indirect ‘feedback’ from other systems operating improperly. Perhaps certain trip types, certain client types, or certain staff members are harder on gear than others. Systems engineering suggests exploring all of these as options, and solving equipment control issues at their source: training, modifying trip logistics, changing itineraries for conditions, having suitable gear per client group, etc.

As noted in the introduction to the Equipment Management System, the greater the value of equipment to the success of the operation, the more complex the control system needs to be. It is not uncommon for larger operations to have whole equipment management departments.

A good control system keeps accurate inventory, but also addresses access, storage and security, and tracking.

*THAT REALLY HAPPENED!*

*A CONSULTANT AUDITED FOUR DIFFERENT WHITEWATER PROGRAMS IN ONE SEASON. ONLY ONE OF THE OPERATIONS HAD AN ACCURATE INVENTORY RECORD, EVEN THOUGH ALL OF THEM HAD A ‘SYSTEM’ IN PLACE FOR SIGNING OUT EQUIPMENT. AN UNKNOWN AMOUNT OF GEAR WAS ON LOAN, SENT IN FOR WARRANTY, NON-OPERATIONAL, STORED AT THE BOSS’ HOUSE, OR JUST MISSING.*

**Critical equipment** is any piece of gear that has a direct influence on the health and safety of clients or employees.

**KEY IDEA**

**The single most effective means of improving the quality of any Equipment Management System is to formalize a rigorous inspection and recording procedure.**

**Legal Digest****Opening the Door to Negligence**

*Negligence: failing to do what a reasonable person would have done in the same situation.*

The traditional basis for establishing negligence involves three things:

- 1) A duty be owed not to injure someone in the manner in which he was harmed
- 2) The conduct of the defendant must be sufficiently unreasonable that it amounts to a breach of duty,
- 3) The injury was reasonably foreseeable and not too remote.

In outdoor pursuits, it is rather simple to establish that a duty is owed between a teacher and a student or a guide or instructor and a client. The challenge of the courts and indeed of the outdoor community is in defining what is 'reasonable'. The courts are clear that perfection is not demanded. It is unrealistic to expect that the benchmark will be the highest level of industry certification available. This is not to say, however, that no standards of performance are to be expected. Instead, what the law looks at is what is reasonable in the circumstances.

In the law of negligence, the circumstances are everything. Courts have recognized that it includes the nature of the activity; its objectives; the compatibility or consistency of the activity with its objectives; the activity's inherent risks; the sponsoring organization's mission, philosophy or goals; equipment used; readiness of the participants for the activity; the age and degree of skill and training which the clients may have received in connection with the activity; instructional progressions and evolutions; the qualifications of the instructor or guide; the instructor to student ratio; etc.

It should come as no surprise that the preceding list looks like part of a check-list of sound risk management practices. In this sense, the law isn't something we should be afraid of and avoid understanding (although keeping a healthy distance from the courtroom can never be a bad thing) but seek to understand so that it makes us better managers of risk and better providers of outdoor pursuits experiences.

The circumstances become problematic when the nature of risk is taken into account or factored into the equation. Adventure activities are inherently risky. This isn't to say that they are like a loaded gun left unguarded on a kitchen table in the presence of young children. But risk is in the very DNA of activities like rafting, skiing, canoeing and climbing. These activities would be inextricably altered if risk were completely removed. In this sense then, risk is inherent and integral to the activity. Accepting this, the circumstances envision that students or clients are intentionally situated into risky situations.

Putting a client into an environment which by design is dangerous strains conventional risk management systems as well as the traditional application of tort law.

The circumstances are more than a little confusing when it comes to teachers and outdoor education. The standard against which the courts' reference is based on is a 1893 case which held that a teacher is bound to take care of his pupils as would a careful father or prudent parent. In the face of hurricane force winds of change in schools – meaning that learning no longer occurs within 4 walls bound by blackboard and chalk but by rivers and mountains in the outdoors - the courts have not budged from the prudent parent standard. Lower level courts have explored alternative tests, as in what would an ordinarily competent instructor do or what would be reasonable, but the Supreme Court of Canada source or most recent case? has been resolute that the standard remains that of a prudent parent, subject to a laundry list of conditions and caveats.

The circumstances around which negligence will be fashioned in such instances must warrant that the activity was essential to the outcomes desired and that reasonable measures were undertaken to mitigate the risks. In law and in risk management, this is the challenge confronting outdoor pursuits and confounding the courts. Whitewater rafting without running whitewater becomes a float trip. Heli-skiing in terrain with no risk of avalanche is impossible. For the guide or risk manager, the exercise then becomes a balance of offsetting 'reasonable' risk with 'unreasonable' risk. Easier said than done! To wit, try explaining the reasonableness of running a Class IV stretch of river on a commercial trip which results in a client getting dumped, trapped in a strainer and consequently drowned. The questions to be answered are then three-fold: could the objectives of the trip be sufficiently met by choosing a different activity, or the same activity but not to the same degree of difficulty or severity, or the same activity in a different location? If the answer is no to all of the above then it becomes necessary to employ legal defences in our risk management strategy which require the use of waivers and releases of liability. This is discussed below.

The foreseeability of the harm suffered is key to establishing negligence. Foreseeability refers to the likelihood of an event happening or the extent to which an event was foreseeable or could be anticipated. Courts have attempted to apply mathematical models to negligence. An example: if probability is called  $P$ ; injury is  $L$  and the burden to remove the risk is  $B$ ; liability depends upon whether  $B$  is less than  $L$  multiplied by  $P$ ; i.e., whether  $B < PL$ . Alternative tests have been devised and while they help conceptually to understand the relationship between risk and the duty to do something about it, the framework rests on a shaky foundation. In other words, the assignment of quantitative numbers to subjective variables is just convenient shorthand for guesswork and intuition. Furthermore, such algebraic expressions do not address the dilemma of outdoor pursuits wherein the circumstances intentionally contemplate the possibility of someone getting injured.

Together then, reasonableness and foreseeability, represent the twin pillars of negligence and competent risk management.

The concept of negligence is challenging to grasp in the context of outdoor pursuits. After establishing that a duty exists and that someone has been hurt, to be negligent means that there has been a breach of the expected standard of care. To put another way, if the standard of care is to be viewed as the bar that a pole vaulter needs to clear then a breach of the standard of care is akin to failure to clear the bar. In other words, negligence need not be so bad as to be considered gross, reckless, intentional, wilful or wanton. It just has to be unreasonable in failing to meet the required standard of care.

The question of what is reasonable vexes the courts and the outdoor community. The courts do not expect a guide or outdoor education instructor to be judged against the world's most qualified practitioner who may have a PhD with 25 years experience and is internationally industry certified in the discipline. The courts do not expect people to not make mistakes and to be paragons of perfection. They are instead to be judged against what is reasonable in the circumstances. The circumstances will likely demand qualifications commensurate or comparable with a reasonable professional in the activity. Guiding associations have contributed to the outdoor industry overall with improved client care and safety practices. Industry certifications and benchmarks will form part of the equation in the court's determination of the standard of care but it will not be the sole basis for it.

## Inspection:

Equipment inspection is a disciplined and systemized approach to assessing the condition of critical equipment.

In many cases, it makes sense to include certain pieces of infrastructure as critical equipment, such as a high ropes course, an indoor climbing wall, workshop areas, and public areas, such as steps, eating areas, and washrooms.

### Particular issues to consider in systems planning:

*NOTES FROM THE FIELD:*

*HAVE INSPECTION FORMS THAT INCORPORATE PASS/FAIL TRIGGERS AND NOTICE FOR REPLACEMENT PURCHASE NEEDED.*

High quality alpine ski areas have a very disciplined inspection system that sees parking, entry zones, lift areas and ski runs regularly inspected, recorded, and signed off by the responsible staff member. Problems are identified, prioritized, and acted upon appropriately. This system is applied under direct legal advice from their insurance providers – their statistics indicate that certain areas are higher risk than others, and basic safety measures can offset that risk substantially. Disciplined inspection (and recording) plugs a potential liability hole before it

becomes a problem, and insures the specific safety measures integrate into a comprehensive system.

Adventure operations need a similar system for critical gear and infrastructure. There is an assumption that critical gear is ‘checked’ by the instructor before use: ‘feeling’ the rope as it’s uncoiled; ‘checking’ Personal Flotation Devices (PFDs) after clients have put them on; doing a ‘circle check’ before driving a van.

The reliability of any inspection procedure is suspect if it is not prescribed, trained and practiced. ‘Feeling’ a rope would be extremely hard to justify in court as being an accurate way to gauge its ability to hold a fall, even though it is common practice in the field. But more importantly, what should it ‘feel’ like? Does everyone have the same ‘feel’? How thorough is this method?

### **KEY IDEA**

**Recording this inspection is the great missing step to close the loop on this system. From a liability perspective, recording amplifies the strength of the system. It changes it from a subjective ‘feel’ to a quantifiable number or checkmark. A recording procedure that captures the inspection and documents a piece’s integrity sustains the whole Equipment Management System, and informs the Control, Maintenance and Retirement steps in the cycle.**

Likewise PFD buckles and stitching can be examined, and routinely float tested to ensure their flotation rating has not degraded. Tugging on the shoulders of a client's PFD suggests its snugness, but says nothing of its ability to float that person in water.

Start by brainstorming a list of critical gear as per the definition above. For every piece, a thorough, rigorous inspection that tests the piece's ability to do its task is base level. This could be anything from checking that the batteries work in the satellite phone to testing the smoke detectors in the storage garage.

As part of the inspection strategy, clear triggers need to be established for pass or fail, and authority given to the inspecting guide to retire questionable equipment or relegate it to a repair pile. These triggers become part of the documentation process, and build the quantification of the system by removing subjectivity. Some of these triggers exist within other industries or within specific activities, and need to be created in house where none exist.

Formalizing the inspection of critical equipment should be considered a first step in improving your existing practice and moving towards system integration. A documentation process accompanied by clear triggers for pass or fail round out this phase of the Equipment Management Cycle.

### **Maintenance:**

If the Equipment Management Cycle works as suggested, the maintenance step takes care of itself. The Control phase manages inventory and ensures the right people have access to the tools they need (and the wrong people don't!) while the Inspection produces the documentation and history for the inventory. Maintenance plays a supporting role to these two functions.

### **Particular issues to consider in systems planning:**

Establishing routine maintenance cycles for individual items is the only real issue to address, which gets worked into the Inspection and Control features of the system. Maintenance cycles can be informed by manufacturers, outside industries and activity specific guidelines, but need to factor in intensity of use, lifespan, and the ability of people using the equipment.

Clearly, gear that goes out every day will need more attention than that which is rarely used, but the ability of the user has a greater impact on the lifespan of any item, be it rain gear or a cargo trailer. Time invested in training staff in gentle equipment use pays for itself by lengthening its lifespan. Creating a trip or skill progression that minimizes the destruction of client gear does the same. An 'ex-

#### *NOTES FROM THE FIELD:*

*PURCHASING OR BUILDING UNIFORM EQUIPMENT, RESOURCES AND INFRA-STRUCTURE AIDS IN MAINTENANCE. ONE SET OF TOOLS IS ALL THAT IS REQUIRED TO FIX WHAT WILL EMERGE AS TYPICAL PROBLEMS. STAFF WILL BUILD EXPERTISE AND EFFICIENCY WITH REPAIRS. USE MANUFACTURERS' WARRANTIES AS A MEANS OF MAINTENANCE (SUCH AS RETURNING TENTS AND BACKPACKS FOR WARRANTY ZIPPER REPLACEMENTS). GET CUSTOM EQUIPMENT OR RESOURCES BUILT TO ADDRESS AN OPERATION'S STANDARD MAINTENANCE ISSUES I.E. REINFORCE WEAR AREAS.*

pedition mentality' is required, that believes that equipment is vital to safety, and need be treated with care. This is difficult to instil in day guides, who know that there is a garage full of equipment they can pull tomorrow if something breaks today.

An associated consideration in the maintenance of gear is the cost / benefit of fixing compared to replacement. Time is often considered to be pretty cheap in some organizations, and great amounts of it will be spent giving life support to clearly dying equipment. Tents, canoes and trucks are often nursed well past their rightful retirement, to the detriment of company image, staff that has to put up with terrible gear, and the cost of the hours in the shop. The Retirement and Procurement steps can address this by establishing cost / benefit parameters up front, and identifying the lifespan of inventory as it is purchased. Best practice has outfitters turning over equipment on a very regular basis, selling it in an 'almost new' condition to fully fund its brand new replacement (more on this below).

Maintenance, while it often stands alone within an organization, is directed by the Control and Inspection systems. Done properly, maintenance supports other aspects of the Equipment Control System, and is not an indicator of 'negative feedback' – the place where other systems dump their problems to be fixed (i.e. poor training of drivers equals maintenance issues for vehicles). Approaching the Equipment Management Cycle with an eye to reduce maintenance time and costs to an absolute minimum will steer the whole cycle in the proper direction.

### Retirement:

Equipment that no longer passes inspection, outlives its maintenance cycle, or is no longer relevant is retired. As the last step in the Equipment Management

Cycle, gear retirement triggers the need to procure a replacement, starting the cycle over again.

Particular issues to consider in systems planning:

Equipment at the end of its life is sold, disposed of, or archived. Turning over equipment (selling it) while it is still useful is generally the most cost effective means of managing equipment. Assuming an operation can purchase equipment at discounted bulk or supplier rates, it can often be used to generate profit for X number of seasons, and then be sold for a portion of its initial purchase price. This is a tried and true model that rental outfitters use (see sidebar). The trick is to turn the equipment over often enough that it is still in good condition and consumer's perceived value is still high, and works equally well for backpacks as it does for vehicles and office computers.

Disposing of gear means to literally destroy it. If there are any safety concerns at all regarding used equipment, especially critical equipment, it needs to be permanently disabled so it will

#### *THAT REALLY HAPPENED!*

*A RESORT BUYS TEN CROSS COUNTRY MOUNTAIN BIKES AT A WHOLESALE RATE OF \$600 EACH (WITH A NORMAL RETAIL PRICE OF \$900). EACH BIKE IS RENTED OUT FOR 150 DAYS (OVER 2 SEASONS) AT \$50 PER DAY. AFTER 150 DAYS THEY ARE THEN SOLD FOR \$400, PERCEIVED BY CUSTOMERS AS LESS THAN HALF OF THE RETAIL PRICE. WHILE THE RESORT LOSSES \$200 ON THE PURCHASE PRICE, EACH BIKE HAS GENERATED \$7500 IN REVENUE (LESS MAINTENANCE EXPENSES).*

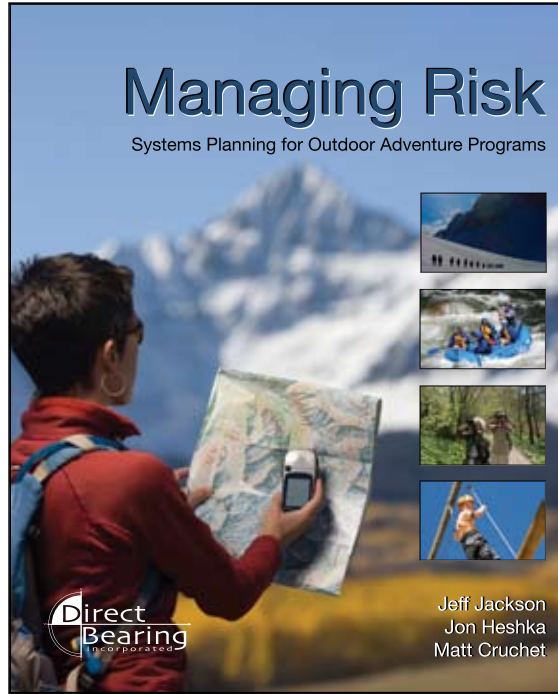
never work its way back into inventory, staff gear, or find its way into the hands of the public. This is basic public safety and liability protection. Clear expectations should be related to staff to ensure that retired climbing carabiners don't show up on staff harnesses (or water bottles for that matter), or that retired PFDs aren't used on the busiest day of the year when all gear is needed.

This brings up the grey area of 'semi-retirement'. Without clear inspection protocols gear gets lumped into new / retired / OK-but-don't-use-it-unless-you-have-to categories. The latter is an obvious problem. If it is only an aesthetic concern it can be a legitimate category, such as having changed to a new colour of rental gear (therefore do not rent out the old colour). But if the category is old gear that can't be trusted, it needs to either be removed for maintenance or retired. It would be difficult to defend the decision to put marginal gear into the hands of clients when you knew it wasn't up to the standard of gear that the rest of the group had. Guides can often find themselves in the difficult position of having to improvise or send out marginal gear. This is a sure sign that the Equipment Management System is broken, as the Control and / or Inspection phases should have caught the problem and had it resolved before the guide is stuck dealing with it.

The last category of retirement is archiving – keeping it for sentimental reasons. This is fine – what else would the boss decorate the office with? – but there needs to be clear indication that it is retired, and not in the OK-but-don't-use bin.

Regardless of the means of removing the equipment from use, there needs to be a trigger that signals the need to replace it, either immediately or for the next trip or season.

## The New Risk Management Resource for the Outdoor Adventure Industry



*Managing Risk: Systems Planning for Outdoor Adventure Programs* introduces the next generation of risk management thinking to the adventure industry. *Managing Risk* guides you through building and integrating The Seven Systems of Outdoor Adventure Risk Management Planning into your existing experiential and adventure-based operations or programs.

By working through supporting case studies, sample forms, industry leading templates and best practice guidelines you will map The Seven Systems that drive risk management planning in your organization to ensure your organization's long-term sustainability.

Written by adventure, education and business professionals, this book is required reading for program managers, owner/operators, senior staff and anyone looking to make a career in the adventure industry. Order your copy now!



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