

Property Management – An Industry of Fragmented Technology Solutions

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Abstract – Successful property management, which can be done by individual owners or by professional property managers, has numerous interrelated complex business processes: tenant attraction, screening, leasing, tenant move-in, property maintenance, retention/lease renewals, tenant move-out, and reputation management. Property managers must be highly skilled communicators and thoroughly understand the legal implications of housing and contract law in their operating environments. The lack of affordable solutions available to small and mid-sized property managers drives their use of fragmented technology solutions provided by numerous technology vendors that employ redundant data-gathering methods, putting them at a competitive disadvantage. This research paper explores the information systems needs of property managers in contrast to the solutions available to them in the marketplace.

Keywords – Automated business process, fragmented technology solutions, property leasing, property management, property marketing.

I. GLOBAL AND UNITED STATES PROPERTY MANAGEMENT

The property management industry is not unique to the United States. However, its approaches can vary significantly from region to region and country to country as it does state to state in the U.S. Political, cultural, financial, technological, privacy issues, and social pressure can influence how properties are owned in disparate locations.

According to the United States Census Bureau, an agency of the United States Government, there are approximately 139.7 million households in the United States. Of the 139.7 million households, 89.4 million households, or 36 % of American households, are rented [1].

In the United States, the property management industry consists of primarily individual property owners who own a few rental properties, on average fewer than five properties. Due to the small number of properties owned and requiring management, the overall management of the rentals is managed by the individual owners/DIY property managers. These owners must manage all the processes or subcontract the work, including tenant attraction, tenant screening, leasing, tenant move-in, property maintenance, tenant retention/lease renewals, tenant move-out, and reputation management.

While looking at the total number of households, the United States has a substantially greater volume of properties to rent and manage. As noted earlier, most property management is

done by property managers as they own five or a few properties. The tasks involved in this management are significant and can become exhausting. However, United States individual property managers gain in rental revenue and the property's capital gains. It is a combination of short and immediate revenue along with potential long-term growth.

Despite having fewer housing units, Australia has a more mature approach to property management than the United States. According to the Australian Institute of Health and Welfare (AIHW), an Australian Government agency, there are 8.3 million households in Australia. Of these 8.3 million households, 2.6 million, or 32 % of Australian households, are rented [2].

The Australian property management industry is made up mostly of significant management companies or professional property managers. These companies maintain or manage properties of varying sizes, keep a portfolio of customers spread over vast geographic regions, and makeup 54 % of the industry [3]. These companies are tasked by their customers to handle and manage all the processes or subcontract the work, including tenant attraction, tenant screening, leasing, tenant move-in, property maintenance, tenant retention/lease renewals, tenant move-out, and reputation management.

The total Australian number of households is far fewer than that of the United States. Even if a property owner holds a small number of properties, they are more likely to use professional property management firms than in the U.S. The need for the property owner to take on the tasks required to operate their rental property is most likely a result of the maximum financial benefit being the capital gain from the property, which is a long-term benefit.

Contrasting and comparing a few of the similarities and differences between the United States and Australian property management industries [4]:

- Australian property owner investors rely on property appreciation and tax savings for the financial growth of rentals.
- American property owner investors primarily rely on net cash flow followed by tax advantages, leveraging, and property appreciation.
- Debt reduction is more straightforward in the United States than in Australia, helping to create equity faster.

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- Financing is cheaper and easier to obtain in the United States as compared to Australia.
- Raising capital is also more accessible in the United States as compared to Australia.

Property management is global, and it takes place wherever properties are held as investments. The approach to property management is governed based on the locality laws, norms, and customs. While the motivation of real estate investors in Australia and the United States may vary slightly based on investment objectives, the approach to managing properties with scalable, repeatable business processes is virtually the same [5].

II. SUCCESSFUL PROPERTY MANAGEMENT DRIVEN BY AUTOMATED BUSINESS PROCESSES

Successful property management companies require automated systems, which can support their repeatable business processes for the number of properties under management, the volume of transactions associated with them, and the team supporting their managed properties and tenants.

The fundamental business processes of successful property management are: tenant attraction, screening, leasing, tenant move-in, property maintenance, retention/lease renewals, tenant move-out, and reputation management, regardless of the number of properties under management. Each of these technology-enhanced business processes is discussed on the following page.

A. Tenant Attraction

Tenant attraction is a task in the tenant placement process that involves advertising and marketing a rental unit to the most significant number of prospective renters/tenants possible. The overall goal of the tenant attraction task is to attract as much interest within the marketplace amongst potential renters/tenants as for the rental unit(s) to be rented.

Tenant attraction for single rental units can be thought of as a 1-to-many in nature as there is just one rental unit being marketed to many prospective renters. In contrast, multi-unit rentals, such as apartment buildings, can be viewed as few-to-many or many-to-many as multiple rental units are being marketed to many prospective renters. These relationships can be visualized in both Fig. 1 and Fig. 2.

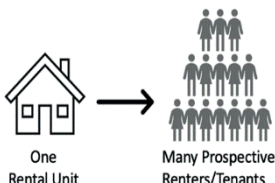


Fig. 1. One-to-many relationship.

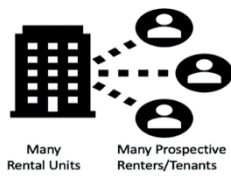


Fig. 2. Many-to-many relationship.

While the logistics of handling the inquiries between single and multi-unit rentals vary a bit, the overall goals and approach to tenant attraction remain the same: find the best-qualified tenant(s) for the rental unit(s) available as quickly as possible while minimizing costly rental vacancy.

Most property managers will advertise their available rental units on the Internet on a variety of popular real estate websites, some of which specialize in just rentals and others that feature rentals in addition to properties for sale.

One of the challenges to marketing properties on the Internet, besides the content of the advertisement, is reaching as large an audience as possible, which means advertising on many competing websites as potential renters frequent many of them.

Larger property managers and associated leasing agents have access to cloud-based tools, usually via their property management software, allowing them to enter the content and photos of their property advertisements in one place and then push the listing or syndicate it to multiple real estate websites simultaneously (see Fig. 3). Taking down the listing after the property has been rented is usually as simple as clicking on a delist option in one place within these systems [6].

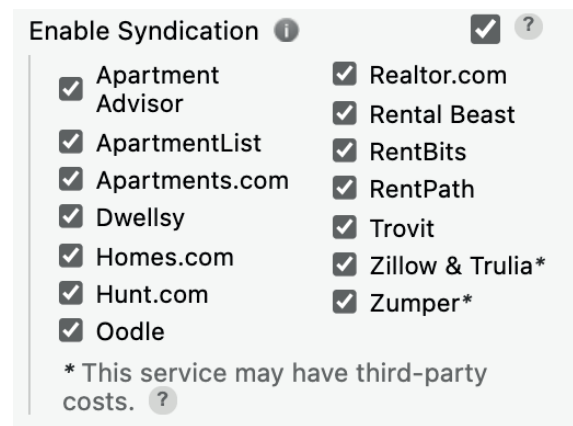


Fig. 3. Sample syndication options for website advertising (Listing & Delisting).

Without syndication functionality in their property management software, small DIY property managers are forced to create separate accounts on the various real estate websites that they wish to advertise on and then create and recreate their advertising content on each of those sites. Removing the rental listing after the property has been rented means visiting each of the websites advertised and going through the vendor's unique steps for delisting it.

This ability to syndicate, enter once, and push the listing out to many websites, saves a considerable amount of time and resources and can be viewed as a competitive advantage for the property managers and listing agents who have this functionality within their technology platform [7].

Attracting potential tenants is just part of the equation, efficiently dealing with the volume of inquiries received is the other side of it as once the listing advertisement starts running online, the inquiries by prospective tenants will start coming in. Depending upon market conditions and the desirability of the property, the volume of inquiries can be overwhelming.

Many inquiries will start with a request to view the property as the real estate websites make it extremely easy for viewers to hit that button. The problem is that many of the inquiries requesting a viewing have not thoroughly read the advertisement, and they will not be a good match for the advertised property. For instance, the property may be

advertised as available for move-in 60 days from now, but the prospective tenant may be looking for an immediate move-in [8].

Processing the volume of inquiries quickly and fairly will lead to the greatest success in finding the most qualified candidate for the advertised rental unit(s) without running afoul of federal and state fair housing laws [9].

Pre-screening on fundamental criteria, such as desired move-in date, monthly rental budget, desired lease length, income requirements, pets, etc., is a way to avoid wasting everyone's time by showing a rental unit to a potential tenant with mismatched needs.

Online real estate websites often add to the confusion by presenting their version of a rental application to prospective tenants at the wrong time.

Leveraging a Customer Relationship Management (CRM) system with some automated screening or BOT capabilities can be a cost-effective way to capture the many initial inquiries from prospective tenants and pre-screen them without costly human intervention. It is necessary to set the stage for viewings for the prospective tenants whose needs more closely match the property [10].

Coordinating property viewings/showings has traditionally been a very time-consuming process. Schedules must be coordinated with the leasing agent, the prospective tenant, and the current tenant living in the unit. The pandemic has caused a shift in the traditional approach to viewings by allowing leasing agents and property managers to leverage technology such as video, 360-degree views, and self-showings. Property videos and 360-views allow potential tenants to virtually view properties on demand from wherever they are without physically needing to visit. Self-showing technology, which works best on vacant properties, enables prospective tenants to view a property independently without the need for an agent to be present.

B. Tenant Application and Screening

After viewing it, prospective tenants who are interested in the property apply for a tenancy through a rental application. The application process can be daunting, confusing, costly, and potentially damaging for prospective tenants. It can vary widely between property management companies, especially if they are applying for multiple properties.

Depending on the technological sophistication of the property management company, applications can be on paper or online. There is not an industry-standard rental application format, and they tend to be unique concerning the required data. The prospective tenant can spend considerable time gathering the required information and completing an application to provide considerable background information, including their employment history and rental history.

Screening is essential to reduce the risk of placing an unqualified tenant into a property [8]. Property management companies with a well-defined online application process can streamline the application process for their internal screening and their applicants [11]. Their systems can force compliance when an applicant enters data by requiring all data fields to be

completed and all supporting documentation uploaded, such as government ids, proof of income, and pet information. Complete online applications allow property management companies to review and process applications much quicker, accurately, and efficiently than paper-based applications.

Without consistent, well-defined application and screening processes in place, property managers run the risks of violating federal and state fair housing laws, which can be very costly and placing risky unqualified tenants in their managed properties [9].

After a complete application is received, the applicant's information can be submitted for an electronic background check from large credit bureaus. Applicants typically consent to background checks as part of the application process. The level of what is allowed to be checked, credit, criminal, and eviction, is governed by state law. An application fee for each adult applicant is usually required to cover the processing cost of the background check.

Reference verifications are conducted on the employment and housing information submitted by the applicant. Verifications are a manual process involving the property management company phoning employers and landlords that can happen anywhere in the application process after a complete application is submitted [12].

The applicant screening is concluded once a completed application has been received and the results of the reference checks and electronic background checks from a large credit bureau have been finalized. At this point, the property manager should have a good indication if they should consider offering tenancy to the applicant based on the standard selection criteria that they have established for all applicants.

C. Leasing Process

If a tenancy is offered and the applicant still agrees to move forward, the leasing process begins. Otherwise, the property manager will screen additional applicants.

The leasing process involves the property manager providing the prospective tenant with a legal lease, any required legal disclosures, and any appropriate lease addendums for their review and signature, and collecting deposits, fees, and prepaid rent from the prospective tenant. Once both parties and the payments sign, the lease documents are collected, then the lease and payment information can be recorded in their system for the new tenant [13].

Property managers with integrated property management systems should be able to use all of the data from the application and screening process in the leasing area of their system without the need to re-enter it [14]. Reusing previously entered data saves time, resources and reduces the chances of errors through duplicate data entry. Electronic copies of executed lease documents can be stored in the system for all parties to view at any time through the property manager, owner, or tenant portals. Reoccurring accounting entries for monthly rent or other fees can be established for the tenant's financial ledger. Compliance with the tenant's security deposit can be adhered to.

D. Tenant Move-In

Communication with the new tenant before their move-in date is vital as there are many things that they will have to arrange for before moving in, such as: paying any remaining balances due, putting utilities in their name, obtaining insurance, and transferring postal delivery. Some of these tasks can have extended lead times. The tenant move-in communication can also address the frequently asked questions on the turnover logistics, the rental unit's state, and trash collection [15].

Some property management systems provide tenant communication platforms for sending out template-based emails and text messages, which can be set up to be property or lease-specific and prove to be ideal for move-in communication. Other systems may integrate the move-in communication into the leasing process as an addendum.

Photos or videos of the rental unit should be taken before the tenant moves to memorialize the property's actual state when the tenant took possession of it. Any claims about the condition arise during or post tenancy. These photos and videos should be stored with the tenant leasing records and made available to the tenants during their first day of the tenancy, so they can memorialize any additional defects present at move-in that were not captured in digital imagery by the property manager.

Setting expectations by the property manager via stored communications regarding due dates of monthly rent payments, the mechanisms for reporting service issues, preventative maintenance, and what to do in case of an emergency are also an important component in the tenant move-in process, archiving copies of these communications in case claims arise during or post tenancy is important [15].

Many integrated property management systems allow access portals for the various stakeholders that will use the system; property managers, property owners, tenants, and vendors. Each stakeholder has a different reason to use the system via their portal and is presented with the functionality and data which are appropriate for only their use, as illustrated in Table I below.

TABLE I
STAKEHOLDER ROLES AND RESPONSIBILITIES IN ONLINE PORTALS

	Property Manager	Property Owner	Tenant	Vendor
Status of Rent Payments	X	X	X	
Lease Documents	X	X	X	
Status of Service Tickets	X	X	X	X
Property Financials	X	X		
Status of Vendor Payments	X	X		X
Management Fees Charged & Collected	X	X		
Status of all Properties under Management	X			

E. Rent Collection and Financials

Timely rent collection is critical to the success of investment properties. Rent revenue gives property owners the resources needed to pay their mortgages, taxes, insurance, HOA fees, and perform the maintenance on their property. Property managers with automated management systems tend to collect rent from the tenants quicker and more thoroughly for their owners than their counterparts do.

Many of the better-automated property management systems generate reoccurring rent charges in the online tenant portal, making it convenient for tenants to pay their rent on a timely

basis via their checking, savings, or credit card accounts. The portal gives tenant's an up-to-date view of the financial activity for their account, while their real-time rent payment entries automatically update the back-office management finance and accounting system for the property manager.

Automated rent collection systems are essential for property management companies managing 20 or more rental units as rent payments are generally due on the 1st day of each month. Managing all the payment activity properly for their active tenants requires a fast workflow [5].

Automated, easy, trusted, flexible tenant payment systems are a competitive advantage for property management companies and enhance their chances of getting an excellent online review. An automated friction-free rent collection process allows tenants to pay their rent conveniently while immediately crediting their account and providing them with automatic proof of payment. Conversely, manual payment processes which do not provide tenants with up-to-date account visibility and post payments late tenant ledgers increase the chance of receiving negative reviews.

F. Property Maintenance

Various types of scheduled and reactive maintenance need to be performed on managed properties, while tenants are living there.

Reactive maintenance addresses issues that tenants report, such as broken items, water leaks, electrical fixtures not working, heat or air conditioning not working correctly, malfunctioning appliances, and infestations of insects or rodents. Tenants should be encouraged to report all property issues, even if they caused them, as minor annoying issues can quickly become large, costly problems if they remain unaddressed [16].

Issues can occur or be noticed by the tenant at any time of the day or night. They are generally more likely to be reported after hours or on weekends as most tenants are home from work and occupy their rental units. Most property management companies do not staff phone lines 24/7, nor is every issue an emergency, so tenants should have an easy way to communicate items needing repair to property managers.

Property management companies with automated maintenance systems can have their technically savvy tenants directly report their property issues in their online tenant portal from their computers or phones, the same portal they make their rent payments. Technically challenged tenants can report issue messages via phone or text. These messages must then be entered into the automated maintenance systems, which slows up the process. However, it generally takes longer to address issues reported in this fashion as the information reported tends to be incomplete.

Responding on a timely basis to tenant requests for service, even if the service request is denied, shows tenants that a property manager cares about them and their tenants [16]. This goodwill can help keep tenants in place longer and avoid frequent and costly tenant turnover. It can also minimize the risk to the property manager's online reputation by receiving 1-star reviews [17].

Regularly scheduled and preventative maintenance inside and outside of properties can help to keep real estate assets operating correctly and extend their useful life.

Preventative maintenance on inside items may include: furnaces, air conditioners, appliances, electrical, plumbing, and fuel delivery systems. Outside maintenance may encompass: lawn mowing, tree & bush trimming, snow removal, siding, window, door, deck, roof, and chimney inspections [18].

Recording and storing all maintenance and repair issues in automated maintenance systems give property managers the ability to triage the severity of reported issues more rapidly and schedule or dispose of tenant repair requests. It also maintains all preventative and reported issues against property and all work performed by staff and vendors while providing historical records of all work performed or reported and the costs incurred. The collective issue data from all properties can be used for predictive maintenance forecasts, such as if one brand of appliance is more likely to generate costly repair bills than another or if a certain vendor is more likely to be unsuccessful with a specific type of repair assignment.

G. Retention and Lease Renewal

Retaining well-performing tenants for many years is the goal of most property managers as it is easier and less costly to keep existing tenants than it is to attract and screen new tenants.

Tenants are more likely to seek lease renewals if their life situation has not changed. The rental costs remain competitive, their maintenance requests are being addressed, and their utility costs are not high [19].

Property managers are more likely to offer lease renewals to tenants who have adhered to their lease contract terms, are not generating high repair costs, are not causing complaints in the managed rental community, and are not monopolizing too much of the property managers' time.

The use of integrated automated property management systems gives property managers a data-driven view of tenancies, including the timeliness of their payment history, all repairs, and lease violations/infractions, thus allowing property managers to make data-based decisions on renewals.

Decisions on lease renewals by both property managers and tenants need to be made several months before the lease ends so that the property manager has ample time to attract new potential tenants if needed and the existing tenant has sufficient time to locate a new rental unit if they are not offered a renewal [20].

The decision to renew can be communicated electronically to existing tenants and recorded in the system. Tenants who are not being renewed will be sent a notice to vacate with specific instructions on when the lease will end and how the tenancy will end. Tenants who are being renewed will receive a conditional lease renewal offer, which they are under no obligation to accept, that may be subject to a physical inspection of the rental premises and a review of critical paperwork such as renters' insurance and proof of continued employment/source of income to ensure lease compliance and the income/payment qualification standards are still being met. After the renewal compliance review process is done, the tenant will be sent a new

lease document to e-sign, and the new lease dates, rates, and occupants, if there is a change, will be recorded in the system after all parties sign it. The new lease information will automatically update the rent roll and the automated rent billing system.

H. Tenant Move-Out/Property Turn-Over

The tenant turnover process occurs when a tenant leaves their rental property at the end of their lease, and the property must be made ready for new tenants to move in. Turnovers could be quick and easy when departing tenants leave their rental units in the same condition as when they moved in [20]. However, turnovers can be highly time-consuming and expensive if the outbound tenants left the property messy or damaged.

The ideal situation for property owners is to have tenants move out at the end of the month and to have the new tenants move in at the beginning of the new month to avoid vacancies and lost rent between tenancies.

Property managers also have a vested interest in keeping rental units filled as they cannot collect management fees when rent is not being collected. However, the reality is that property managers may be turning many units at the same time. It may be physically impossible to have all of the units ready in the short window between move-out and move-in, especially if the departing tenants left the property in bad condition.

Departing tenants, those not having their lease renewed, should receive a notice to vacate (NTV) along with detailed move-out instructions 45 to 90 days before their lease ends. The detailed move-out instructions should include departure information, final payments, turning off utilities, address change information, and the condition in which the property should be left in to be refunded their maximum-security deposit. The move-out instructions should set the expectations of what is required of outbound tenants.

Property managers should also be contacting departing tenants about 30 days and ten days before their scheduled departure date to ensure that their move-in is still on as scheduled [19]. This helpful communication has the two-fold benefit of solidifying the online review process for reputation management and heading off potentially disastrous problems with cascading consequences by finding out in the final days of tenancy that a tenant is holding over and not moving out as planned.

Once the tenant has legally vacated their rental unit, the property manager should take possession, secure the unit, change the locks, inspect the unit, and record the condition of the rental unit at move-out with photos and video into the inspection module of the property management system. The property's current condition should be documented and compared with photos/video at a move-in time to determine what wear and tear repairs and tenant damages the departed tenant will be held financially responsible for.

The property manager will arrange with their maintenance staff or vendors to have wear and tear repairs, and tenant damages repaired and have the unit painted and cleaned as required [21]. A full accounting of all tenant-caused expenditures should be recorded in the tenant ledger so that they

can be charged against the security deposit before it is refunded. State laws dictate what can be charged against tenant security deposits and the amount of time that former tenants must receive a full accounting of their security deposit and their refund if they are entitled to one. Most states require this accounting within 30 days, or less, from move-out and can impose strict penalties on landlords for non-compliance. The reporting compliance requirement does put pressure on property managers to get the repairs completed and invoiced within the compliance window.

If the property manager thought that the outbound tenant would leave the rental unit needing time-consuming repairs and cleaning, they would most likely elect to incur some vacancy between tenants to get the unit ready properly for the next tenant or to market the unit.

Property turnovers can be one of the most significant expenses that property owners incur if tenants' vacancies and extensive repairs are necessary. Regular communication with vacating tenants and property inspections can help to minimize costly surprises when a tenant move-out.

I. Reputation Management

Online reputation has become increasingly important as potential tenants, and property owners often consult online reviews before considering doing business with a property management company. From the revenue side of their business, property managers serve two distinct audiences: property owners and tenants, but they only have one reputation viewed by all. All online reviews, good and bad, flow to that single online reputation [22].

Building a solid online reputation means earning mostly positive 5-star reviews and favorable comments from reviewers. It does not take many negative 1-star reviews to bring an online reputation score down [17].

Earning good reviews from leads, tenants, property management clients, staff, and vendors is not a straightforward property management process. Relationships can span many years and take many twists and turns before a property manager is reviewed. A tenant can happily reside in a property for five years with every request being responded to perfectly but write a 1-star review for their property manager when departing their tenancy because of deductions to their security deposit for damages that they caused. It is almost impossible to have a review removed by a major website after it has been posted.

Various property management business processes over the life of the stakeholder relationship (Table II) can create triggers for bad reviews as they are so easy to post at any time. Property managers are at the most risk of receiving negative reviews when their stakeholders are angry about something that has occurred.

The ideal time for a tenant to leave a review is just after move-out when they have received their security deposit back. Chances are greater that they will leave a positive review if they receive all of their security deposit back and a negative review if they receive less than their full security deposit back. The risk areas of receiving negative reviews during the tenancy are greatest during monthly rent collection when payments are

delinquent, botched, or delayed maintenance and repairs when lease renewals are not extended, and anytime that, the communication by the property manager is negative.

TABLE II
POINTS IN THE LIFECYCLE OF RELATIONSHIP WHERE REVIEW MAY BE LEFT BY STAKEHOLDERS

Business Process	Tenants	Property Owners	Staff	Vendors
Public-Facing Communication	X	X		
Responsiveness	X	X	X	X
Truthfulness of materials	X	X	X	X
Screening Process	X	X		
Leasing Process	X	X		
Rent Collection	X			
Owner Draw Payments		X		
Maintenance & Repairs	X	X	X	X
Lease Renewals	X	X		
Tenant Move-out	X	X	X	X
Security Deposits	X	X		

The ideal time for a property owner to leave a review is three to six months after their managed properties have been fully onboarded. Chances are greater that they will leave a positive review if they receive owner draws quickly and entirely and leave a negative review if they receive less than their complete owner draw. The other high-risk areas of receiving negative reviews by property owners are as follows: when they terminate the relationship, when an excessive amount of tenant monthly rent payments is delinquent, there are extended vacancies, botched or overcharged maintenance and repairs, when an excessive number of leases are churned and not renewed.

A bad online reputation can hinder a property manager's ability to manage properties from property owners and attract qualified tenants for the properties under their management [22].

Potential tenants can leave reviews based on how they were treated or responded to during the tenant attraction, screening, or leasing process.

Current tenants may leave reviews based on the property manager's communication, rent collection, or maintenance processes.

III. CONCLUSION

Successful property management companies must balance the needs of the property owners with whom they manage properties against the needs of the tenants who live in and pay rent for those managed properties.

A property manager has a fiduciary responsibility to their property owners and an obligation to be a good steward for the properties under their management [23]. They do so by keeping their managed properties in good repair [18], accurately managing finances, minimizing vacancies, being cost-efficient in repairs and turnovers, and being compliant with all laws and regulations governing the properties under their management.

While the primary loyalty of property managers is to their property owners, the tenant relationship is also critically important. Tenants provide the revenue needed by owners, a portion of which is allocated toward property management fees. Tenants are best positioned to observe items in need of repair

or maintenance and report them to their property manager as they live in the property every day.

Maintaining an exceedingly positive online reputation, which is constructed from the reviews from property owners, prospective tenants, current tenants, past tenants, vendors, past and present employee reviews, is critically important to the long-term success of the property management company [22]. A positive reputation will create a positive feedback loop for future business sales by helping property managers attract new property owners, tenants, contractors, and employees. Management companies with good reviews receive a lot of Internet-based inquiries and traffic [24].

Seventy-five percent of prospective tenants consider online reviews important to the decision-making process when considering rental properties.

The fundamental business processes of successful property management, tenant attraction, screening, leasing, tenant move-in, property maintenance, retention/lease renewals, tenant move-out, and reputation management are the same regardless of the number of properties under management.

With just a few properties to manage, property management for DIY property managers does not require sophisticated information systems as the transaction volume is low. They can maintain their financial records in spreadsheets and small online accounting systems and leverage various free cloud-based services to manage their small portfolio ad hoc. What cannot be captured in a system can be augmented with brute force labor by the operator.

Larger property management companies with dozens or more properties under their management require automated, repeatable business processes, which can support the number of properties under management, the large volume of transactions associated with them, and the team supporting them. These firms require the scale of integrated information systems with third-party services such as listing syndication, credit checks, maintenance management, customer relationship management, reputation management, digital media library vaults, and more [5].

While the brute force ad hoc approach of disjointed systems and business processes can work well for smaller DIY property managers, it quickly falls apart in larger operations as the number of properties, tenants, contractors, and employees grows.

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